DOCUMENT RESUME

ED 461 267 FL 024 706

AUTHOR Marlett, Stephen A., Ed.
TITLE Work Papers of the Summer Institute of Linguistics, University of North Dakota Session. Volume 41.
INSTITUTION Summer Inst. of Linguistics, Grand Forks, N. Dak.
PUB DATE 1997-00-00
NOTE 66p.; For individual papers, see FL 024 707-713. For volume 40, see ED 400 694.
AVAILABLE FROM For full text: http:/www.und.nodak.edu/dept/linguistics/wp/1997.htm.
PUB TYPE Collected Works - General (020)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Dictionaries; Discourse Analysis; English; Interpersonal Communication; *Intonation; Kinship Terminology; *Language Patterns; Language Research; *Linguistic Borrowing; *Linguistic Theory; Literary Genres; *Literature; *Morphology (Languages); Phonemics; Phonology; Pragmatics; Quechua; Spanish; Syllables; Uncommonly Taught Languages
IDENTIFIERS Seri; Zapotec

ABSTRACT

The collection of seven working papers in linguistics includes: "Proceeding from Syllable Inventory to Phonemic Inventory in the Analysis of Liangshan Yi (Andy Eatough); "Empty Consonants in Root-Medial Position" (Stephen A. Marlett); "What Is Literature? A Definition Based on Prototypes" (Jim Meyer); "Seri Dictionary: People and Kinship Terms" (Mary B. Moser, Stephen A. Marlett); "An OT Account of Laryngealization in Cuzco Quechua" (Steve Parker); "High Pitch as a Mark of Respect in Lachixio Zapotec" (Jan Persons); and "Rule-Governed Allomorphy Can Be Suppletive Also" (David Tuggy). (MSE)

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ED 461 267

Work Papers

of the Summer Institute of Linguistics, University of North Dakota Session

URL: http://www.und.nodak.edu/dept/linguistics/wp/1997.htm

1997 Volume 41

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Proceeding from Syllable Inventory to Phonemic Inventory in the Analysis of Liangshan Yi

Andy Eatough

(9 *pages*) ➤Paper

Liangshan Yi (also known as Nosu, spoken in Sichuan Province, China) has many phonetically-interesting syllables. In this paper an articulatory description of the full range of distinctive syllables of this language is given and it is shown that the standard phonemicization of these is reasonable.

Empty Consonants in Root-medial Position

Stephen A. Marlett

(4 pages) ➤Paper

Evidence is given that empty consonants occur in root-medial position in Seri, which bears on the observation in Broselow 1995 (Skeletal positions and moras) that such had not been described in the literature. This brief work complements an earlier publication (Marlett and Stemberger 1983, Empty consonant positions in Seri) which posited such consonants at the beginning of various verbs.

What is Literature? A Definition Based on Prototypes

Jim Meyer

(10 pages) ➤Paper

Most definitions of literature have been criterial definitions, definitions based on a list of criteria which all literary works must meet. However, more current theories of meaning take the view that definitions are based on prototypes: there is broad agreement about good examples that meet all of the prototypical characteristics, and other examples are related to the prototypes by family resemblance. For literary works, prototypical characteristics include careful use of language, being written in a literary genre (poetry, prose fiction, or drama), being read aesthetically, and containing many weak implicatures.

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Seri Dictionary: People and Kinship Terms

Mary B. Moser and Stephen A. Marlett

(21 pages) ➢Paper

A subset of the Seri bilingual dictionary (in preparation) is presented which includes terms referring to people, kinship terms, and verbs that are closely related to them. This version includes English glosses in addition to the Spanish glosses, and an English-to-Seri reversal.

An OT Account of Laryngealization in Cuzco Quechua

Steve Parker

(11 pages) ➢Paper

Classical phonemic accounts of Cuzco Quechua posit three distinct series of stops: plain, aspirated, and glottalized. Parker and Weber 1996 argue instead for a root-level feature of laryngealization governed by a small number of formal mechanisms. In this paper, the analysis is taken one step farther and it is shown that even greater explanatory power may be achieved by appealing to the model of Optimality Theory.

High Pitch as a Mark of Respect in Lachixio Zapotec

Jan Persons

(2 pages) ➢Paper

Demonstrating respect to the addressee is accomplished by speaking in a high-pitched voice among the Zapotec speakers of Santa María Lachixío. Various factors determine the use of this feature.

Rule-governed Allomorphy Can Be Suppletive Also

David Tuggy

(5 pages) ➢Paper

Commonly occurring linguistic forms, including allomorphs, tend to be learned (listed in speakers' mental lexicons) even if they are formed according to the pattern of a linguistic rule. They thus have dual motivation: the motivation given by the rule, and the suppletive motivation of their having been learned. This accounts for the otherwise inexplicable persistence of rule-governed allomorphy when the conditioning environment is destroyed through diachronic change, producing apparent positive exceptions to the rule.

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This page was last updated on July 27, 1997

Proceeding from Syllable Inventory to Phonemic Inventory in the Analysis of Liangshan Yi

Andy Eatough

Liangshan Yi (also known as Nosu, spoken in Sichuan Province, China) has many phonetically-interesting syllables. In this paper an articulatory description of the full range of distinctive syllables of this language is given and it is shown that the standard phonemicization of these is reasonable.

Introduction

Liangshan Yi (Nosu) is spoken in Liangshan Prefecture and in adjacent parts of several neighboring prefectures in southwestern Sichuan Province, and in nearby parts of northwestern Yunnan Province in the People's Republic of China. It is classified by comparative linguists as belonging to the Loloish subgroup of Tibeto-Burman. The language has a traditional orthography which has been in continuous use for many centuries. A standardization of this orthography has been devised and promoted by the Sichuan Language Commission, and the vernacular of Xide County, Liangshan Prefecture, has been chosen to provide the phonological basis for this standardization. Although an important isogloss bundle passes through Xide County, the phonetics of the speech varieties there are fairly uniform, and there is a widely agreed upon phonemicization for them. There are numerous sources available in Chinese which give this phonemic analysis, but none of them start from the phonetics to give the rationale behind the phonemicization. It is simply assumed that the phonemicization is correct, and any phonetic description that might be given is less detailed than would be necessary to reconstruct this phonemicization. In this paper I give a more detailed articulatory description of the range of distinctive syllables in the Xide County vernacular, and show that the standard phonemic analysis is a reasonable one.

The Syllables of Liangshan Yi

The syllable is a phonological notion rather than a purely phonetic notion. Though certain phonetic definitions work well for many languages, none has been proposed which works perfectly for every language. Therefore, we must determine some reasonable criteria for determining what is a syllable in Yi. Most of the syllables in most of the world's languages have one sonority peak; the most common syllable type worldwide is CV, an onset consisting of one consonant followed by a rhyme of one vowel. There are many clear cases of CV syllables in Yi, so let us look first at some of them to see what criteria there might be in Yi for deciding what is a syllable in the less clear cases. In the following fairly close transcription, underlining indicates a tight throat[1] (raised larynx and/or retracted tongue root, resulting in a smaller pharyngeal cavity). The vowels other than [o̲] may, in slow speech or pre-pausally, be pronounced with slight diphthongization, gliding from a slightly closer vowel to a slightly more open vowel.

(1) [mo#] *soldier*

(2) [mo&] *to see*

(3) [mo$] *female*

(4) [mɕ̲&] *to dream*

[1] Ladefoged and Maddieson 1990 and Maddieson and Hess 1986 use the terms 'tense' and 'lax', perhaps because they are literal translations of the words used in the Chinese literature to describe these phonation types. They are somewhat non-committal as to the exact nature of the articulation of these phonation types in Yi.

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41
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(5) [mQ&] *bamboo*
(6) [me#] *hungry*
(7) [me&] *to get along with*
(8) [me$] *to stop blowing*
(9) [m@&] *to flick (the tongue)*
(10) [lo#] *hand, arm*
(11) [lo&] *boat*
(12) [lC&] *short amount of time*
(13) [lF&] *ox*
(14) [lQ&] *to come*
(15) [le#] *to not be busy*
(16) [le&] *to go (uphill)*
(17) [l@&] *to burn*
(18) [le$] *elephant*

From the examples above, we can gather that there are tones in Yi, and hypothesize that all syllables in Yi have a corresponding tone. It is also worth noting that, at least in these examples, there appears to be a correspondence between certain vowel qualities and a tight throat phonation. Let us therefore hypothesize that the phonologically relevant difference between [mo&] and [mC&], between [me&] and [m@&], and between [lF&] and [lQ&] is the loose throat versus tight throat distinction, not the vowel quality, with the vowel qualities being affected by the phonation type. Evidence for the phonation type being the phonologically relevant distinction in these pairs comes from a kind of vowel harmony in compound words, in which a loose throat vowel becomes a tight throat vowel when the following syllable has a tight throat vowel.[2]

(19) [lo#] *hand, arm* + [ka&] *palm* > [lC#ka&] *palm of hand*
(20) [jo&] *sheep* + [Na#] *castrated* > [jC$Na#] *castrated sheep*
(21) [e#] *to sleep* + [mC$] *dream* > [@#mC$] *a dream during sleep*
(22) [he&] *outside* + [t@&] *layer, fold* > [h@&t@&] *foreign*
(23) [dze#] *pepper* + [ma&] *small round thing* > [dz@#ma&] *peppercorn*
(24) [lF&] *ox* + [ta&] *to tie* > [la&ta&] *yoke*
(25) [qgF&] *buckwheat* + [nC&] *black* > [qga$nC&] *buckwheat* (sp.)

Let us then assume that there is a tone and a phonation type (tight throat or loose throat) for each syllable in Yi, and that phonological units smaller than the syllable cannot carry their own tone and phonation type. Based on that assumption, we find that there are some syllables that consist only of a vowel.

(26) [o$] *goose*
(27) [C&r@&] *head hair*
(28) [e#] *to sleep*
(29) [emo] *stomach*
(30) [e*ko&] *home*
(31) [e&] (pronoun)
(32) [@&] *duck*
(33) [Q&Ne&] *red*
(34) [Q*mo&] *mother*
(35) [Q#mo$] *old*
(36) [Q$mo&] *not see*

There is also a wide variety of syllables in which the only segment is a phonetic consonant. In the following transcription, there is no diacritic marking consonants as syllabic. Instead, any consonant symbol followed by a tone marker may be assumed to indicate a syllabic consonant. A superscript *w* indicates simultaneous labiovelarization. A ligature joining *m* and *l* indicates simultaneous articulation of the two consonants, so that the tongue is in the position to articulate an

[2] The vowel symbols used are chosen because the vowel sounds are in each case close to the IPA cardinal vowels to which the symbols correspond, though it should be added that [o], [C], [F], [e], and [@] all sound slightly closer than the corresponding IPA cardinal vowels, and [Q] sounds slightly more central.

alveolar lateral, the lips are closed, and the velum is open, allowing air to escape through the nose. The sounds transcribed as postalveolar fricatives are all laminal, but the distinction between the palatalized ones and the non-palatalized ones is easy to hear because the non-palatalized ones are articulated with a rather flat tongue and they almost sound retroflex.

(37) [mS&] *to do*
(38) [kC&lC&mS#] *angry*
(39) [mS$pQ#] *horse*
(40) [mS$me#] *about*
(41) [do@mS&] *knife*
(42) [mS&de@] *territory, region*
(43) [e#mS$] *corn*
(44) [mo&mS&] *weather, sky*
(45) [a$ml#] *now*
(46) [a$ml&] *daughter*
(47) [ml#] *to lick (a newborn animal)*
(48) [zF&l&] *descendants*
(49) [l$] *seed*
(50) [l#] *to take off (clothes)*
(51) [lS&] *dragon*
(52) [lS&ma#] *stone*
(53) [lS#] *enough*
(54) [l&ma&] *four (round things)*
(55) [vS&] *dry*
(56) [vS&] *to enter*
(57) [vS$] *to sell*
(58) [vS#] *to push (a mill)*
(59) [a&vS#] *blue, green*
(60) [mS&vS#] *sky, heaven*
(61) [vS&Ne&] *small intestines*
(62) [y&] *to go (downhill)*
(63) [y$] *to be the size of*
(64) [v&] *shadow, image*
(65) [v#] *to saw (wood)*
(66) [Z&] *grass*
(67) [Z$] *to scrape (with knife)*
(68) [z&] *to burn*
(69) [z$] *to hide*
(70) [z&] *to press down on*
(71) [z#] *leopard*
(72) [z$l&z#l&] *messed up (hair)*

There are also many syllables in which, although there is more than one element which could reasonably be identified as a phonetic segment, the most sonorous element in the syllable is nevertheless a phonetic consonant.

(73) [Mml&sz&] *cloth*
(74) [hF&Mml$] *fishnet*
(75) [Mml&] *to close (the eyes)*
(76) [MmS#] *lap*
(77) [MmS&] *to inflate (a pig bladder)*
(78) [MmS&] *mushroom*
(79) [MmS$] *to be as tall as*
(80) [mS&Nl&] *the wind*
(81) [Nl&] *to flee*
(82) [lF&Nl#] *bag made of musk deer skin*
(83) [NlS&] *to stir-fry*
(84) [NlS#] *to watch over (livestock)*
(85) [NlS&] *to catch on fire*
(86) [sz&] *anymore*
(87) [sz&] *wood*
(88) [sz$] *to recognize*
(89) [sz#] *thirsty*
(90) [vz#mo$] *female's elder sister*
(91) [vz$] *liver flukes*
(92) [vz&] *to buy*
(93) [fz&] *ugly*
(94) [bz$] *to give to*
(95) [pHz&] *to hurt (said of wounds)*
(96) [pHz#] *to spit*
(97) [pHz&] *to fold*
(98) [pz#] *vagina*

(99) [pz&] *to call (said of eagles)*
(100) [pz$] *to carry on the back*
(101) [tsHz#] *generation*
(102) [tsHz&] *he, she, it*
(103) [tsHz$] *one*
(104) [tsz&] *to plant*
(105) [tsz$vz#] *spittle*
(106) [tsz&] *to crack*
(107) [tsz#] *to dig*
(108) [dz#mS&] *the world*
(109) [dz&] *to ride*
(110) [ndz&] *to be in charge*
(111) [ndz&] *spicy-hot*
(112) [a&ndz#] *pure, clean*
(113) [ndz$] *even, level*
(114) [cy$] *to marry*
(115) [tcHy$Ne&] *river deer*
(116) [lF&tcHy&] *cattle dung*
(117) [wo@tcy&] *bear gall bladder*
(118) [dy$] *underneath*
(119) [dy&] *bronze*
(120) [ndy$] *to believe*
(121) [ndy&] *skin*
(122) [ndv#] *to clear up (weather)*
(123) [dZ&] *tooth*
(124) [ndZ&] *alchoholic beverage*
(125) [tSZ&mS&] *quickly*
(126) [tSZ$] *to rely on*
(127) [tSHZdye] *to become rotten*
(128) [tSHZ#kHvS&] *constellation name*
(129) [tSHZ&] *to call (said of pheasants)*
(130) [SZ$] *seven*
(131) [SZ&] *gold*
(132) [kHvS&] *to steal*
(133) [kHvS#] *year*
(134) [qgvS&] *to love*
(135) [gvS&] *nine*
(136) [fvS#] *six*
(137) [svS$] *like, similar to*
(138) [mS&tSHvS&] *autumn*

There are also syllables in which a trilling of the lips can be involved. This trilling of the lips will be symbolized by a superscript *B*. The bilabial trilling starts with the release of the onset, and continues part way into the rhyme, which in every case is [vS] or [vS]. This trilling is in free variation with the lack thereof, and it tends to be more lenis when there is a preceding bilabial stop, and noticeably more fortis when there is a preceding alveolar stop. In the standard pronunciation, this trilling occurs only when the onset consonant is an alveolar or bilabial stop.[3]

(139) dBvS& *to emerge*
(140) bBvS@re& *yak*
(141) bBvS#zF& *mosquito*
(142) mbBvS& *to have had enough to eat*
(143) ndBvS$ *to hit*
(144) tBvS& *thousand*
(145) mS&tBvS# *fire*
(146) bBvS&dBvS& *writing implement*
(147) a@pHBvS&bBvS&dF& *folktale*
(148) tHBvS# *household*
(149) pBvS& *to return*
(150) pBvS& *badger*

To sum up what we have seen so far, there are six clear cases of phonetic vowels. Three of these have a tight throat phonation, and for each there is a corresponding vowel with a loose throat phonation. There is a large number of consonants which have some of the same characteristics as

[3] Xie Zhili (p.c.) reports that in certain areas (where the northwestern and southwestern varieties of Liangshan Yi come together) there is bilabial trilling that accompanies the palatalized postalveolar onsets. When I heard him demonstrate, I thought of Donald Duck.

the clear cases of vowels, such as carrying tone, carrying a tight-throat/loose-throat distinction, and being the most sonorous element of a syllable. The clear cases of vowels are listed in 151-153, and the syllabic consonants are listed in 154-162. 163 is a chart of all onsets which contrast before the vowels in 151-153.

(151) a̲ / F

(152) e̲ / e

(153) C̲ / o

(154) z̲ / z

(155) Z̲ / Z

(156) y̲ / y

(157) l̲ / l

(158) ml̲ / ml

(159) yS̲ / vS

(160) lS̲ / lS

(161) mS̲ / mS

(162) ByS̲ / BvS

(163)

labial	*alveolar*		*postalveolar*	*palatalized*	*velar*	*glottal*
mb	nd	ndz	ndZ	ndy	qg	
b	d	dz	dZ	dy	g	
p	t	ts	tS	tc	k	
pH	tH	tsH	tSH	tcH	kH	
v	z		Z	y	w	
f	s		S	c	x	h
m	n			r	q	
M	N			G		
	l					
	L					

Phonemic Analysis

If we look at the syllabic consonants in 154-162, we see that none of them occurs in as wide a variety of environments as do the vowels in 151-153. The only onsets that ever precede a syllabic [z] or [z̲] are all labial or alveolar obstruents. The only onsets that ever precede [Z] or [Z̲] are postalveolar obstruents. The only onsets that ever precede [y] or [y̲] are palatalized obstruents. The only kind of onset that can precede [l] or [l̲] is a lateral, and the only kind of onset that can precede [ml] or [ml̲] is a bilabial nasal. Since these syllabic consonants are all phonetically similar (all involving some kind of coronal stricture) and since they do not occur after the same onsets, let us hypothesize that they are all allophones of the same phoneme. The only potential problem with this is that each of them appears to occur in isolation, i.e., without a distinct phonetic onset, so that it could be argued on this basis that they contrast in identical environments. However, whether they are in fact occurring in isolation comes down to a question of segmentation; for example, does a

word like [z&] 'to burn' consist of an onset [z] and a rhyme [z&], or only of the rhyme [z&]? In 164-173 I list some of the relevant examples, giving a phonemicization that treats these syllabic consonants as allophones of the same vowel phoneme (represented somewhat arbitrarily with the symbol /i/).[4] The analysis is that this vowel completely assimilates to a preceding coronal except in voicing, and is otherwise [z].[5]

(164) [vz&] *to buy* /vi&/
(165) [z̬z&] *to burn* /zi&/
(166) [cy$] *to marry* /ci$/
(167) [y&] *to go (downhill)* /yi&/
(168) [l̬l&] *to flee* /li&/
(169) [l$] *seed* /li$/
(170) [sz$] *seven* /si$/
(171) [z$] *to scrape (with knife)* /zi$/
(172) [mml&sz&] *cloth* /mi&si&/
(173) [m̬l#] *to lick (a newborn animal)* /mi#/

Now let us consider the syllabic consonants in 159-162. These are phonetically similar to each other in that they all involve labialization. Furthermore, each of them occurs after distinct onsets. [vs] and [v̬s] occur after labial fricatives, alveolar fricatives, affricates and nasals, postalveolar obstruents, palatalized obstruents, and velar obstruents. The only kind of onset that [ls] or [l̬s] occur after is a lateral, and the only kind of onset [ms] or [m̬s] occur after is a bilabial nasal. [bvs] and [b̬vs] occur after bilabial stops and alveolar stops. The only potential difficulty in treating these syllabic consonants as a single pair of phonemes is that some of these syllabic consonants can occur without a phonetically distinct onset. But as with the phonemes /i/ and /i̬/ proposed above, the problem can be dealt with by assuming that phonemically there is a sequence of two segments, an onset consonant and a phonetically identical or nearly identical rhyme. Some relevant examples are listed in 174-181, with phonemicizations.

(174) [gvs&] *nine* /gu&/
(175) [svs$] *like, similar to* /su$/
(176) [mms&] *mushroom* /mu&/
(177) [ms&ll&] *the wind* /mu&li&/
(178) [lls&] *to stir-fry* /lu&/
(179) [ls&] *dragon* /lu&/
(180) [ndbvs$] *to hit* /ndu$/
(181) [pbvs&] *badger* /pu&/

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[4] Many of the instances of these phonemes can be reconstructed as coming from proto-Loloish *i.

[5] Actually, 'completely' might be putting it too strongly, since syllabic fricatives, not only in Yi but in other languages like Mandarin Chinese, often involve little audible friction, less than fricatives in onset positions typically involve.

If we combine the vowel phonemes /i/, /i̱/, /u/, and /u̱/ with three vowel phonemes for the clear cases of vowels listed in 151-153, we end up with a ten vowel system, with five pairs of tight throat and loose vowels:

(182) /Q/ [F], /Q̱/ [Q̱]

(183) /e/ [e], /e̱/ [e̱]

(184) /i/ [z ~ Z ~ y ~ l ~ ml], /i̱/ [ẕ ~ Ẕ ~ y̱ ~ ḻ ~ mḻ]

(185) /o/ [o], /o̱/ [C̱]

(186) /u/ [vS ~ mS ~ lS ~ BvS], /u̱/ [v̱S ~ m̱S ~ ḻS ~ Bv̱S]

Since none of the onsets listed in 163 are in complementary distribution with any phonetically similar onsets, there is no reason not to take 163 as a listing of the consonant phonemes.

If we do so, and if we take as our vowel inventory the ten phonemes in 182-186, a few questions remain to be answered. Most literature on standard Yi phonetics mentions a vowel which is like [F] but with a tight throat rather than a loose throat, which we can transcribe phonetically as [F̱].[6] This [F̱] is never actually said in the literature to contrast with [Q̱] and with [F], though such a contrast is implied by some of the charts in which the phonemes are laid out. The fact is, [F] never occurs in the high tone, and [F̱] occurs only in the high tone, and there is no one tone category in which there is a three-way contrast between [F], [F̱], and [Q̱]. It only takes a little abstraction to say that [F̱] is actually the way a phonemically loose throat /a/ is realized in the high tone, the phonetic tightness of the throat being related to the raising of the larynx that often accompanies a high pitch. The standard romanization used in alphabetizing Yi dictionaries assumes such a phonemicization. Examples are given in 187-193, with a phonemicization for each.

(187) tSQ̱& *small thing*	/tSa̱&/
(188) tSF$ *bowl*	/tSa$/
(189) tSF̱# *.o.k.*	/tSa#/
(190) kHF& *dog*	/kHa&/
(191) kHF̱#mo$ *evening*	/kHa#mo$/
(192) kHQ̱# *happy*	/kHa̱#/
(193) kHQ̱& *want*	/kHa̱&/

There are certain syllables for which more than one reasonable phonemicization exists. These all involve a question of which of two consonant phonemes is the onset for /i/ or /u/, or questions of whether there is an onset before one of these two vowel phonemes:

(194) [ndz&] *to be in charge*	/ndi&/ or /ndzi&/ ?
(195) [tsHz$] *one*	/tHi$/ or /tsHi$/ ?
(196) [ẕ#] *leopard*	/i̱#/ or /zi̱#/ ?
(197) [v̱S&] *enter*	/u̱&/ or /vu̱&/ ?
(198) [a̱&v̱S#] *green/blue*	/a̱&u̱#/ or /a̱&vu̱#/ ?

In each of the examples 194-198, I prefer the second phonemicization, but mainly for the reason that the transcriptions used in all the published materials on Yi assume it. (It may also appear to be closer to the phonetic reality, but it only seems that way because of my choosing the

[6] See Chen Shilin et al. 1985, Dai Peiyu, ed. 1991, Li Min and Ma Ming 1988, Qumu Tiexi 1988, and Zhang Yurong and Zhang Hongze, eds. 1984.

vowel symbols *i* and *u* rather than fricative symbols to write the syllabic consonant phonemes.) In each case one could argue that the first phonemicization leaves us with a gap in the system, and one could equally well argue that the second phonemicization leaves a gap in the system. For example, in 197, if we take /u̱&/ as our analysis, we are left with the question of why /v/ never occurs before /u̱/, when its voiceless counterpart /f/ does. Similarly, if we take /vu̱&/ as our analysis, we are left with the question of why /u̱/ never occurs without an onset, when the vowels /o̱/, /e̱/, /a̱/, /o/, and /e/ clearly do. Historical reconstructions are not very helpful in this case, as the result of taking them too seriously will be ending up with a not very symmetrical system. For example, historical reconstructions would lead us to prefer /ndzi&/ for 194, but /tʰi$/ for 195. But if the vowel /i/ can occur after either alveolar stops or alveolar affricates, why do these two categories of consonants never contrast before /i/? So, in the absence of any evidence commending one analysis over another, the more usual analysis of these syllables is not unreasonable.

Contrastive Tone Categories

If one confines one's attention to underlying forms of morphemes, one might gather that there are only three contrastive tone categories, high, mid, and low, and in fact in some northern varieties of Liangshan Yi there are only three categories. However, a fourth tone category turns out to be necessary in standard Yi, even though at first glance this tone appears to be a predictable, non-contrastive variant of two other tone categories. This fourth tone category, a high-mid tone, has two main sources, (1) a rule that changes a mid tone to a mid-high tone before a mid tone, and (2) a rule that changes a low tone to a mid-high tone after a mid tone. Both tone sandhi rules apply in many, but not all, of the compound words where the phonological environment is met, as well as in certain syntactic contexts, such as across the boundary between an object and a verb. 199 and 200 are examples of the second rule, and 201 is one of the exceptions. 202 and 203 are examples of the first rule, and 204 is one of the exceptions. 205 and 206 are among the most likely candidates for morphemes that are underlyingly mid-high tone.

(199) tʰF$y& *book* + hF$ *to look at* > tʰF$y& hF˧ *to look at a book*

(200) wo& *bear* + mo$ *mother* > wo&mo˧ *female bear*

(201) ve& *jackal* + mo$ *mother* > ve&mo$ *female jackal*

(202) gF& *some* + su& > gF˧su& *these/those/the*

(203) a̱& (adjective prefix) + kC̱& *hard* > a̱˧kC̱&

(204) a̱& (adjective prefix) + ŋe& *red* > a̱&Ne&

(205) ce˧ *what?*

(206) o˧ (sentence final particle indicating change of state)

Since it is not possible with a three tone analysis to always predict which syllables will have a mid-high tone on the surface, it is necessary to have a four tone analysis, which is consistent with all the literature on this variety of Yi.

Conclusion

I have shown that the phonemicization upon which the standardized version of the orthography is based is not unreasonable for the pronunciation used in Xide County, given the phonetic facts. It is these phonetic facts that attract my real interest, since Liangshan Yi has bilabial trilling in a wider variety of contexts than any other language yet described in the literature, and also has an astonishingly wide variety of syllabic consonants.

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Empty Consonants in Root-medial Position*

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Evidence is given that empty consonants occur in root-medial position in Seri, which bears on the observation in Broselow 1995 (Skeletal positions and moras) that such had not been described in the literature. This brief work complements an earlier publication (Marlett and Stemberger 1983, Empty consonant positions in Seri) which posited such consonants at the beginning of various verbs.

1. Introduction

Broselow 1995 notes that "all of [the cases of empty onset slots in stems] involve empty C slots in the initial (never internal) position of a stem" (p. 196). She cites the analysis of Seri found in Marlett and Stemberger 1983, in which verbs with empty consonants in stem-initial position are presented. In this brief note, I present some facts which I believe could be or should be analyzed with root-internal empty slots. These facts contribute more evidence of empty onsets, which Broselow notes are predicted *not* to exist by moraic theory.

2. The verbs *know* and *give*

Two common verbs in Seri are *know* and *give*, which are entirely parallel in their conjugation. Some crucial forms (finite forms are all cited in third person) are:[1]

(1)		*know*	*give*	Morphology[2]
a.	Subject Nominalization	kíja	kíjæ	k-i-____
b.	Independent Future	isíja	isíjæ	i-si-____
c.	Proximal Realis	imíja	imíjæ	i-mi-____
d.	Emphatic Realis	iχóa	iχóæ	i-χo-____
e.	Dependent Realis	ipóa	ipóæ	i-po-____
f.	Distal Realis	ijóa	ijóæ	i-jo-____

* Thanks to Ellen Broselow for her comments on this squib. Any remaining errors are mine alone.

[1] The data are cited here using IPA symbols, although most of the previous literature on the phonology of Seri uses the Americanist tradition. Long vowels are represented with double vowel symbols in this paper, however, reflecting the fact that phonetically a long vowel in Seri is not distinguishable from a series of short identical vowels (rare as the latter may be). Their proper analysis is crucial in Seri, however. Some forms of these verbs were cited in Marlett 1994; unfortunately, a couple of errors appeared in those data.

[2] The formatives presented here are: k (subject nominalizer in active non-negative contexts), i (object marker), si (independent irrealis), mi (proximal realis), χo (emphatic realis), po (dependent irrealis), jo (distal realis), t (neutral realis), m (negative), k (imperative—one of several suppletive allomorphs, and the appropriate one to appear before roots beginning with short low vowels), ʔa (subject nominalizer in passive non-negative contexts), p (passive in pre-vocalic contexts). The *k* that appears in (1h-i) is epenthetic.

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g.	Neutral Realis	itáa	itǽæ	i-t-____
h.	Negative Neutral Realis	itkmáa	itkmǽæ	i-t-m-____
i.	Negative Independent Irrealis	iskmáa	iskmǽæ	i-s-m-____
j.	Negative Emphatic Realis	iχomáa	iχomǽæ	i-χo-m-____
k.	Negative Dependent Irrealis	ipomáa	ipomǽæ	i-po-m-____
l.	Negative Distal Realis	ijomáa	ijomǽæ	i-jo-m-____
m.	Negative Subject Nominalization	imáa	imǽæ	i-i-m-____
n.	Imperative	káa	kǽæ	k-____
o.	Passive Subject Nominalization	ʔapáa	ʔapǽæ	ʔa-p-____

Marlett 1981 treated these as irregular verbs, with underlying forms {-aa} and {-ææ}, respectively, solely for the reason that the forms in (1a-c) have a palatal glide in them that does not occur in regular verbs. However, they are not anywhere as irregular as other irregular verbs in the language, so that solution seems a bit drastic. I sketch an alternative analysis below which posits underlying forms which contain a root-medial empty slot, analogous to the empty consonant slots posited in Marlett and Stemberger 1983.[3] This is the kind of form which Broselow 1995 notes has not been reported in the literature to date.

3. An empty slot analysis

The analysis that I propose here includes an empty consonant slot in the middle of these verb roots, as shown informally in (2).

(2)

know	V	C	V		*give*	V	C	V
	|		|			|		|
	a		a			æ		æ

This consonant position is never preceded by a consonant, and so it never appears as a geminated consonant, unlike the examples discussed in Marlett and Stemberger 1983. It either appears as a glide (*j*) or it does not surface as anything.[4] The situation which gives rise to the former does not present itself with the verbs discussed in the previous work, and the latter behavior is entirely consistent with the patterns observed in that work.

The analysis for the 'epenthetic' palatal glide is almost self-evident. The features of the *i* are spreading to the empty consonant position, as shown in (3). The rule is structure preserving, however, because no glide appears after a prefixal *o*; Seri does not have a labiovelar glide. The prefixal *i* appears adjacent to the root-medial empty consonant position by means of a rule of short low vowel deletion that is very general in the language, discussed in Marlett and Stemberger 1983, and evident also in forms (1d-f).[5] The rule essentially deletes a (root-initial) short low vowel after another vowel.

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[3] I have adopted this analysis in more recent work in progress; Marlett 1993 uses {-æCæ} to represent the underlying form of this particular verb for *give*, for example.

[4] The glide is lengthened in this position phonetically, so its presence is not in doubt.

[5] It is possible that the label 'Short Low Vowel Deletion' is misleading. In pre-consonantal position, *o+a* or *o+æ* becomes long *o*, but in pre-vocalic position, *o+a* or *o+æ* becomes short *o*. Perhaps the features of *a* are deleted in both cases, leaving its mora behind generally; the 'compensatory' lengthening which results from the stranded mora is lost in pre-vocalic position, however.

(3)

Underlying Form	V CV VCV | | | | | i p o a a	V CV VCV | | | | | i s i a a	V C VCV | | | | i t a a
SLV Deletion	V CV CV | | | | i p o a	V CV CV | | | | i s i a	(structural description is not met)
Spreading	(blocked by Structure Preservation)	V CV CV | | | | i s i a	(structural description is not met)
Surface Form	ipóa	isíja	itáa

4. Distinguishing between long vowels and vowel sequences

The verbs *know* and *give* behave differently from those which begin with long low vowels. Long vowels always condition the deletion of a prefix vowel, and conjugate very differently from verb roots beginning with short low vowels (Marlett and Stemberger 1983, Marlett 1981). For example, underlying {si-aa} *will be flat* surfaces as [saa] (compare to {si-aCa} *will give*, which is [sija]).

These verbs also behave differently from those which begin with a sequence of identical short low vowels. The latter are not common (and perhaps should not exist at all, by the Obligatory Contour Principle). One verb root which begins with such a sequence is the verb {-aaaɸ} *wear loinstring* (short *a*, followed by long *a*). Likewise, the plural stem of the verb *say to*, {-aaam}, which is related to the singular root {-ai} by an ablaut rule observed in various forms (changing *i* to *aa*), begins with a short low vowel. Such verbs do not have any kind of 'epenthetic' glide in them. In fact, the *i* of a prefix is regularly lowered to [æ] in them when it precedes a low vowel, as shown in (4).

(4)

	wear loinstring	*say to* (plural subject)
a. Subject Nominalization	kǽaaɸ	kǽaam
b. Independent Future	isǽaaɸ	isǽaam
c. Proximal Realis	imǽaaɸ	imǽaam
d. Emphatic Realis	iχóaaɸ	iχóaam
e. Dependent Irrealis	ipóaaɸ	ipóaam
f. Distal Realis	ijóaaɸ	ijóaam
g. Neutral Realis	itáaaɸ	itáaam
h. Negative Neutral Realis	itkmáaaɸ	itkmáaam
i. Negative Independent Irrealis	iskmáaaɸ	iskmáaam

Choice of suppletive allomorph which depends on vowel length also easily distinguishes short low vowel-initial verb roots from other verbs, as described in Marlett and Stemberger 1983 and Marlett 1981. The empty consonant analysis distinguishes the verbs *know* and *give* from other verbs, and also provides a simple and motivated way to account for their phonological behavior.

5. Conclusion

In this paper I have given some evidence to believe that empty consonant positions exist in root-medial positions in Seri. The data do not provide any more convincing arguments for empty consonant positions than previously presented, but they do at least help document more of what is possible in language. One wonders how many other similar cases there are in other 'exotic' (and often endangered) languages of the world. Unfortunately, too few linguists are doing research on too few of these languages, and too little of this research is primary research. This suggests that many of the interesting theoretical proposals that are being made are still relatively untested.

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What is Literature?

A Definition Based on Prototypes

Jim Meyer

Most definitions of literature have been criterial definitions, definitions based on a list of criteria which all literary works must meet. However, more current theories of meaning take the view that definitions are based on prototypes: there is broad agreement about good examples that meet all of the prototypical characteristics, and other examples are related to the prototypes by family resemblance. For literary works, prototypical characteristics include careful use of language, being written in a literary genre (poetry, prose fiction, or drama), being read aesthetically, and containing many weak implicatures.

Understanding exactly what literature is has always been a challenge; pinning down a definition has proven to be quite difficult. In fact, at times one seems to be reduced to saying, "I know it when I see it," or perhaps, "Anything is literature if you want to read it that way." Sometimes the motivation for a particular definition seems like the work of copyright lawyers, aimed primarily at stopping people from using the word 'literature' for works which have not been licensed as literature by...well, by The Critics, by the keepers of the tradition, by "all high school English teachers," and so on. Almost no one is now so naive as to think that The Critics, the high school teachers, or anyone else has a monolithic front on the question—yet most discussions seem to veer either towards an authoritarian definition based on certain critical assumptions, or towards a definition based solely on whatever a particular reader chooses to call literature.

To a member of a college English department who is a linguist rather than a literary scholar, this can seem silly. After all, the word 'literature' is a word in the English language; like all words, it is used by perhaps millions of speakers, speakers who come from vastly different backgrounds and who have quite divergent personal experiences with, and views on, literary texts. And like all words, it is used fairly successfully; speakers and listeners generally communicate adequately, despite this variety of experience, background, and training.

If we assume that a definition of literature should be, in many important ways, like definitions of other words in the language, we will perhaps find a more fruitful approach to the term. Here I will first present two different approaches to definition—the criterial approach and the prototype approach—and then suggest some features of a prototypical literary work.

The Criterial Approach

The usual approach in defining a word in English is to provide a list of criteria which must be met. For example, a bird might be defined as an animal which has feathers, which has wings, and which lays eggs. If an animal meets all of these criteria, it is a bird; if it does not (for example, a bat neither has feathers nor lays eggs), it is not a bird. Other characteristics of some birds—that they fly, for example, or that they sing—are not relevant in the definition, since they are not criteria which are met by all birds. This approach has also been called the checklist approach; if all the items on the list are checked off, the word applies. It is characterized by "clear, inflexible boundaries" and by categories which are "internally defined, i.e., defined on the basis of the properties of the members" (Hohulin 1987:4).

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41 1
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There are many examples of definitions of literature which follow this approach. For example, many of the essays in Hernadi 1978, *What Is Literature?*, attempt a criterial definition:

> To speak sweepingly one can say, summarizing, that in antiquity and in the Renaissance, literature or letters were understood to include all writing of quality with any pretense to permanence (Wellek 1978:20).
>
> Let me, then, end with my own stipulative definition of literature. Literature includes any text worthy to be taught to students by teachers of literature, when these texts are not being taught to students in other departments of a school or university (Hirsch 1978:34).

Even definitions which focus more intentionally on a shifting understanding of literature reveal this criterial approach:

> I should say, then, that literature is a canon which consists of those works in language by which a community defines itself through the course of its history. It includes works primarily artistic and also those whose aesthetic qualities are only secondary. The self-defining activity of the community is conducted in the light of the works, as its members have come to read them (or concretize them) (McFadden 1978:56).

In all of these cases, the attempt is to provide criteria which must be met by all texts in order for them to be called literature. The criteria may be based in the text (as in Wellek) or in a community (as in McFadden and Hirsch), but the criteria must be met.

The Prototype Approach

A different approach to the meaning of words, generally called the prototype approach, focuses not on a list of criteria which *must* be met by each example, but on an established prototype, a particularly good example of the word, to which other examples of the word bear some resemblance. This approach is generally credited to the philosopher Ludwig Wittgenstein, although he did not use the word 'prototype'. In the classic passage on this topic, Wittgenstein addressed the word 'game' and argued that, instead of a list of criteria, we find a family resemblance:

> Consider for example the proceedings that we call "games". I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? ... If you look at them you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that.
>
> ...The result of this examination is: we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail.
>
> I can think of no better expression to characterise these similarities than "family resemblances"; for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc., etc. overlap and criss-cross in the same way. —And I shall say: "games" form a family (Wittgenstein 1953:31-32).

This approach to the meaning of words has been further developed by many linguists—Labov, Lakoff, and others; a good summary can be found in works such as Jean Aitchison's *Words in the Mind* (1987) and John Taylor's *Linguistics Categorization* (1989). Here I will present results of two of the better-known experiments conducted by psychologists and linguists in this domain.

Coleman and Kay, in their article "Prototype semantics: the English word *lie*" (1981), present experimental results which are interesting because their research deals with a rather abstract word, the English noun 'lie'. In Coleman and Kay's analysis, a prototypical lie has three features: the speaker asserts something which is untrue; the speaker believes that it is untrue; and the speaker's intention is to deceive. A set of situations was devised in which these three features were present in all possible combinations, and subjects were asked to note whether they would consider the example to be a lie and how confident they were that other speakers would agree with them.

The results of the experiment were interesting and provided strong support for the prototype view of word meaning. There was great agreement when all three features were present; less agreement when only two were present (e.g., in a "social lie," when the speaker says something which is false but without the intention to deceive, as in "I've had a lovely time"); and there was still less agreement when only one was present (e.g., in an honest mistake, when the speaker says something which is in fact false but which the speaker believes to be true and thus utters without intention to deceive).

Another set of experiments on prototypes was conducted by Eleanor Rosch and reported in 1975 in the *Journal of Experimental Psychology: General.* Among other tests, Rosch gave subjects a list of birds and asked them, "How good an example of the category is this word?" The subjects showed amazing agreement, especially for the best example in the category. For birds, for example, the "birdiest bird" was a robin; other birds which were considered good examples were canaries, doves, and sparrows. Birds which were ranked lower—which were considered to be not such good examples of the category 'bird'—were owls, ducks, ostriches, and penguins.

These experiments provide us with a better understanding of prototypes. For the word 'bird', for example, a criterial definition is possible, and all of the examples used by Rosch would meet the criterial definition given above. There is, nevertheless, a difference in the way speakers think of the various birds—all of which meet the criteria equally well. Apparently speakers organize their mental dictionary by selecting a particular ideal example and then by matching other examples with it, using perhaps a kind of family resemblance framework, such as that suggested by Wittgenstein. On the other hand, Coleman and Kay's work provides us with an example of a prototype for a word which cannot be adequately defined by the criterial approach. Their work suggests, again, that the mental dictionary is organized by prototypes, even when such prototypes are rather abstract concepts.

One important feature of the prototype approach needs to be highlighted here. Note that all of Rosch's birds were, in fact, birds. The fact that an ostrich is not a prototypical bird—not a good example of the category 'bird'—does not change the fact that it is, in fact, a bird. In Coleman and Kay's work, one of the features which they tested was whether the subject was confident that other speakers would agree. For words such as 'lie', the prototype may be an example on which everyone agrees with confidence; for other examples of the category, speakers may either disagree or may agree but with less confidence.

The Literary Prototype

Working from the prototype approach to word meaning, then, I have tried to develop an answer to the question, "What is literature?" Let me reiterate that this is not a checklist approach: I do not intend to eliminate from the category of literature works which meet five, or three, or only one of the characteristics. Rather, as in the work of Coleman and Kay, I believe that speakers of English will show the strongest agreement, and will express the strongest confidence in their judgment, on works which have all of these characteristics.

I suggest, then, that prototypical literary works:

- are written texts
- are marked by careful use of language, including features such as creative metaphors, well-turned phrases, elegant syntax, rhyme, alliteration, meter
- are in a literary genre (poetry, prose fiction, or drama)
- are read aesthetically
- are intended by the author to be read aesthetically
- contain many weak implicatures (are deliberately somewhat open in interpretation)

Written Texts, Marked by Careful Use of Language, in a Literary Genre

The most basic characteristic of literature, it seems to me, is that a literary work is a verbal text. Further, a good example of a literary text will be written: although we can speak of oral literature, the fact that we need to use the qualifier 'oral' indicates that such texts are not the best examples—not the prototypes—of literature.

That characteristic alone would include all kinds of texts which might be considered literature: cereal boxes, found poems, advertisements, shopping lists. And if some wish to call such texts literature, I have no objection; these characteristics, remember, are not a checklist which will keep some texts out of the category of literature. However, prototype theory suggests that there will be less agreement on calling these literature, and that those speakers of English who do so will express less confidence that everyone will agree with them.

In fact, the second characteristic listed above is also quite important: that literary texts are marked by careful use of language, including features such as creative metaphors, well-turned phrases, elegant syntax, rhyme, alliteration, meter. This, it seems to me, is quite significant in establishing the meaning of the word 'literature': on the basis of this criterion, carefully-written personal essays are more likely to be considered literary than are, for example, encyclopedia articles. This characteristic may also provide some explanation for the use of the word 'literature' to mean the published research in a particular field: such literature, in addition to be written text, must also exhibit features of careful use of language according to particular standards.

However, personal essays and researched articles do not meet the third characteristic: prototypical literary works are written in the literary genres of poetry, prose fiction, and drama. Note that I am not restricting the term 'literature' to these three genres; rather, I suggest that works in these three genres provide, to speakers of English, the best examples of the word 'literature'. Works in other genres are often considered literature, but again terminology which is used to describe such works—terms like 'literary non-fiction'—indicate that such texts are not prototypical literary works.

Aesthetic Reading and the Author's Intention

In the example of the word 'bird', we noted that the prototypical bird—the birdiest bird—had features which were, from a criterial approach, not necessary to the definition. Thus, birds which fly and sing and are of a particular size, birds such as robins and canaries and sparrows, were consistently ranked as better examples of the category 'bird' than were birds which do not fly or sing, birds such as owls and penguins and ostriches. Flying, singing, and fitting into an average-size cage are not features of the criterial definition of 'bird'; they are, however, characteristics of prototypical birds.

For the term 'literature', I believe it is important to note that prototypical literary works cannot be identified solely on the basis of their written forms. We must also consider the way in which readers interact with them. I have used the term 'aesthetic' as proposed by Louise

Rosenblatt in her work *The Reader, the Text, the Poem: The transactional theory of the literary work* (1978). This is her definition of aesthetic reading:

> The reader performs very different activities during aesthetic and non-aesthetic readings. The contrast derives primarily from the different in the reader's focus of attention during the reading-event.
>
> In nonaesthetic reading, the reader's attention is focused primarily on what will remain as the residue *after* the reading—the information to be acquired, the logical solution to a problem, the actions to be carried out....
>
> In aesthetic reading, in contrast, the reader's primary concern is with what happens *during* the actual reading event. Though, like the efferent reader of a law text, say, the reader of Frost's "Birches" must decipher the images or concepts or assertions that the words point to, he also pays attention to the associations, feelings, attitudes, and ideas that these words and their referents arouse within him. "Listening to" himself, he synthesizes these elements into a meaningful structure. *In aesthetic reading, the reader's attention is centered directly on what he is living through during his relationship with that particular text* (Rosenblatt 1978:23-25; emphasis in the original).

In other words, a reader reads aesthetically when the main purpose of reading is not to derive information, facts, date to be remembered. Of course we may well remember what we read aesthetically—but that is not our primary focus in reading. Readers who read mystery novels aesthetically may well reread the same novel many times, with increased enjoyment; for me, Dorothy Sayers's mystery *Murder Must Advertise* falls into the category of a novel which I reread regularly, despite the fact that I know every detail of the plot quite well.

I suggest, however, that a prototypical literary work must meet an additional qualification: in addition to the reader's adoption of an aesthetic stance towards the work, there must be evidence of the author's intention. Here my list of characteristics is not intended to probe the brain of the author, but rather to provide a simple statement about words which can be arranged by editors to look like poems but which were not written as poems by their authors. Perhaps the best known example comes from this passage by Walter Pater from his essay on the Renaissance:

> The presence that rose thus so strangely beside the waters, is expressive of what in the ways of a thousand years men had come to desire. Hers is the head upon which all "the ends of the world are come," and the eyelids are a little weary. It is a beauty wrought out from within upon the flesh, the deposit, little cell by cell, of strange thoughts and fantastic reveries and exquisite passions. Set it for a moment beside one of those white Greek goddesses or beautiful women of antiquity, and how would they be troubled by this beauty, into which the soul with all its maladies has passed! All the thoughts and experience of the world have etched and moulded there, in that which they have of power to refine and make expressive the outward form, the animalism of Greece, the lust of Rome, the mysticism of the middle age with its spiritual ambition and imaginative loves, the return of the Pagan world, the sins of the Borgias. She is older than the rocks among which she sits; like the Vampire, she has been dead many times, and learned the secrets of the grave; and has been a diver in deep seas, and keeps their fallen day about her; and trafficked for strange webs with Eastern merchants; and, as Leda, was the mother of Helen of Troy, and, as St Anne, was the mother of Mary; and all this has been to her but as the sound of lyres and flutes, and lives only in the delicacy with which it has moulded the changing lineaments, and tinged the eyelids and the hands. The fancy of a perpetual life,

> sweeping together ten thousand experiences, is an old one; and modern philosophy has conceived the idea of humanity as wrought upon by, and summing up in itself, all modes of thought and life. Certainly Lady Lisa might stand as the embodiment of the old fancy, the symbol of the modern idea (Pater 1986:150).

This passage is taken from the middle of a long essay on Renaissance art; its style is fairly typical of the essay of a whole, and not atypical of Pater's style. Admittedly Pater's style is extreme for an essayist. Yet one sentence from this essay was taken by William Butler Yeats and published as the opening poem in the *Oxford Book of Modern Verse*, which he edited, in this form (Yeats 1936:1):

Mona Lisa
Walter Pater

She is older than the rocks among which she sits;
Like the Vampire,
She has been dead many times,
And learned the secrets of the grave;
And has been a diver in deep seas,
And keeps their fallen day about her;
And trafficked for strange webs with Eastern merchants;
And, as Leda,
Was the mother of Helen of Troy,
And, as St Anne,
Was the mother of Mary;
And all this has been to her but as the sound of lyres and flutes,
And lives
Only in the delicacy
With which it has moulded the changing lineaments,
And tinged the eyelids and the hands.

It seems to me that most readers, meeting the poem version, would be more confident in calling it literature than they would be the original version; in this judgment they are reflecting the earlier characteristic, that prototypical literary works are in literary genres such as poetry (rather than in genres such as art criticism or effusive Victorian essay). Yet, I think, the fact that Pater did not write his sentence as a poem—that this particular format is due to an editor, even though the editor is a distinguished poet—would make most speakers of English less confident in calling this literature. We are more likely to call a text literary if we know that the author intended it to be presented as a poem (or as prose fiction, or as a drama).

Weak Implicatures and Openness

Finally, I believe that prototypical literary works are characterized by a more open interpretation. In this I have been influenced by several works in the linguistic area of pragmatics, particularly Sperber and Wilson's *Relevance* (1986) and Blakemore's further development of their ideas in *Understanding Utterances* (1992).

In pragmatics there is an important distinction between 'explicatures' and 'implicatures' in understanding the meaning of a text. An explicature is the semantic representation which is present in the linguistic cues of an utterance; an implicature depends on the explicatures (the propositions which are expressed) together with the context. In one of Blakemore's examples, "The park is some distance from my house," the explicature is "only a trivially true proposition,"

whereas the implicature is something like this: "The park is further from my house than you might think" (1992:81).

However, these writers are careful to emphasize that speakers may not always have a specific meaning to communicate. In the example above, the meaning "The park is further from my house than you might think" results from a strong implicature: given the context and the assumption that speakers intend to be relevant, we are fairly sure that that meaning is what the speaker intended to convey. In other cases, an utterance may contain weak implicatures—meanings which are present but which are less strongly present. As Blakemore puts it:

> Speakers do not always intend to communicate a specific set of assumptions: sometimes the speaker's intentions are less determinate so the hearer is simply encouraged to think along certain lines without necessarily coming to any specific conclusion (1992:168).
>
> Every hearer (or reader) is guided and encouraged by the text in the sense that it gives access to contextual assumptions which yield implicatures... A creative hearer is encouraged to take a greater share of the responsibility in the interpretation process, so that the extra effort she invests is rewarded by a wide array of very weak implicatures, which she is encouraged to explore (1992:172).

In other words, in some utterances, the speaker or writer does not have one particular meaning to convey; rather, speakers are invited to pursue many different interpretations without the assumption that they will find the sole correct one. Their reward lies, not in getting the information, but in experiences a greater sense of intimacy with the writer.

And this is the definition of poetic effect which these authors suggest: "the effect of an utterance which achieves most of its relevance through a wide array of weak implicatures" (Blakemore 1992:157). This is the final characteristic I propose for a prototypical literary work: a prototypical literary work contains many weak implicatures, so that readers are invited to think of many propositions which are only weakly present.

To illustrate these last three characteristics, I provide two texts. The first is an excerpt from Irma Rombauer and Marion Rombauer Becker's majestic cookbook, *Joy of Cooking* (1975:507-508):

> *About Tongue*
>
> Lucky indeed is the cook with the gift of tongues! No matter from which source—beef, calf, lamb or pork—the smaller-sized tongues are usually preferable. The most commonly used and best flavored, whether fresh, smoked or pickled, is beef tongue. For prime texture, it should be under 3 pounds.
>
> Scrub the tongue well. If it is smoked or pickled, you may wish to blanch it first, simmering it about 10 minutes. Immerse the tongue in cold water. After draining, cook as for Boiled Fresh tongue, below. If the tongue is to be served hot, drain, plunge it into cold water for a moment so you can handle it, skin it and trim it by removing the roots, small bones and gristle. Return it very briefly to the hot cooking water to reheat before serving.
>
> If the tongue is to be served cold, allow it to cool just enough to handle comfortably. It skins easily at this point but not if you let it get cold. Trim and return it to the pot to cool completely in the cooking liquor. It is attractive served with Chaud-Froid Sauce or in Aspic, see below.

To carve tongue, cut nearly through at the hump parallel to the base. But toward the tip, better looking slices can be made if the cut is diagonal.

[Recipes follow: Boiled Fresh Beef Tongue; Beef Tongue with Raisin Sauce; Boiled Smoked, Corned or Pickled Tongue; Tongue Baked in Creole Sauce; Tongue in Aspic. Under Boiled Fresh Beef Tongue, the writers recommend that tongue be served with Hot Mustard Sauce, Piquant Sauce, or Horseradish Sauce.]

About Heart

Heart, which is firm and rather dry, is best prepared by slow cooking. It is muscle, not organ meat, and so may be used in many recipes calling for ground meat. Before cooking, wash it well, removing fat, arteries, veins and blood, and dry carefully. A 4- to 5-pound beef heart will serve 6; a veal heart will serve one.

[Recipes follow: Baked Stuffed Heart with Apple and Onion Dressing; Braised Heart Slices in Sour Sauce.]

Although this text certainly bears testimony to the personality of the writers and hints at some metaphoric interpretations ("Lucky indeed is the cook with the gift of tongues"), most speakers of English would not regard this work as a strong example of literature. It may be read aesthetically by some readers, but most would read it efferently, for the information contained; similarly, it is clear that the writers intend for us to read it for its information.

On the other hand, Elaine Magarrell's poem, "Joy of Cooking"—although strikingly similar to the cookbook excerpt above—is closer to the prototype:

I have prepared my sister's tongue,
scrubbed and skinned it,
trimmed the roots, small bones, and gristle.
Carved through the hump it slices thin and neat.
Best with horseradish
and economical—it probably will grow back.
Next time perhaps a creole sauce
or mold of aspic?

I will have my brother's heart,
which is firm and rather dry,
slow cooked. It resembles muscle
more than organ meat
and needs an apple-onion stuffing
to make it interesting at all.
Although beef heart serves six
my brother's heart barely feeds two.
I could also have it braised
and served in sour sauce.

Here the metaphoric sense of 'tongue' and 'heart' strike us immediately. We begin to explore several weak implicatures: 'tongue' as the organ of speech, a sharp tongue, and so on. The words are nearly identical to the cookbook, yet we are reacting quite differently. As readers, we are

probably reading aesthetically, not for the information we will take away, but for "the associations, feelings, attitudes, and ideas that these words and their referents arouse within" us (Rosenblatt 1978:25). We are also fairly certain that the writer intends for us to read in this way, and we find that pursuing the weak implicatures yields results. This text is much closer to the prototypical literary work.

Can This Definition Be Applied?

As I have taught introductory courses for undergraduate English majors, my students and I have tried to refine these characteristics and to apply them to written texts. On the whole we have been fairly satisfied that this set of characteristics describes prototypical literary texts—texts which are felt to be good examples of the category called literature, texts which speakers would agree belong to that category.

We have looked at texts which we felt were not prototypical literary texts to see if they would be described as such by these characteristics. Do popular romances meet all of these characteristics? Probably not: although they can be read—and usually are read—aesthetically, they are not typically marked by many weak implicatures. The text is more straightforward than a literary text would be. They are, in fact, quite predictable—in style as well as in content, so that the writing is probably not marked by prototypical features such as creative metaphor. In fact, this corresponds to our sense of whether these works are literary. Some might say that they are—many, or even most people, might say that they are. But there would be some disagreement, some hesitation, some lack of confidence. They are thus not ideal examples of literature.

A category of texts that may be problematic for us is children's literature, such as C.S. Lewis's *The Chronicles of Narnia* or Susan Cooper's series *The Dark Is Rising*. These texts would, I think, meet all of the characteristics established above, yet I suspect that they do not belong in the category of prototypical literature—or do not belong there as firmly as other, more prototypical, works. To return to Rosch's bird example, such works may be canaries or sparrows but are probably not robins.

Finally, some have suggested that an additional characteristic should be added: that prototypical literary works deal with the human condition and experience in some way. When I have discussed this with my students, however, they have been loath to accept this characteristic. How do works such as Orwell's *Animal Farm* or Wordsworth's "I wandered lonely as a cloud" (more commonly known as "Daffodils") deal with human experience? It is only through the last characteristic we have mentioned: through the many weak implicatures which we are invited to pursue as we read, implicatures which lead us to consider human experience. In that sense, of course, literature does deal with human experience, but perhaps we have said enough about this without mentioning it specifically.

The word 'literature' will always pose some problems not posed by words such as 'furniture' and 'bird'. The educational system has functioned as a kind of certifier of what literature is, and many speakers of English would call whatever works they were taught in their high school English classes 'literature' without regard to any other characteristics. Yet the word 'literature' is, after all, a word in the English language, and if we use it as we communicate with each other, it should be possible to define it as a word. And current theories of semantics and of word meaning suggest that definitions are best done, not through a rigid set of criteria which must be met by each example, but through understanding a prototype to which other examples are more or less closely related.

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Seri Dictionary: People and Kinship Terms

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A subset of the Seri bilingual dictionary (in preparation) is presented which includes terms referring to people, kinship terms, and verbs that are closely related to them. This version includes English glosses in addition to the Spanish glosses, and an English-to-Seri reversal.

The Seri language of Mexico contains an unusually large number of kinship terms. These have been described in detail in Moser and Marlett 1989 (in Spanish) and Moser and Marlett 1993 (in English), and were included in Moser and Marlett 1996. In this article we present these same terms once again and also other vocabulary items that refer to people (including verbs related to these terms). Unlike the previous works, which were more technical in nature and oriented toward an academic audience, this article is essentially a small part of the Seri bilingual dictionary (Seri-Spanish, Spanish-Seri) which is currently in preparation. Our intention is that it will be the first of several small publications focusing on various semantic domains.[1]

While the Seri dictionary in preparation will not contain English, these smaller pre-publication editions will differ in that they will in fact include English as well as Spanish. The first section will be English to Seri, and the second section will be Seri to Spanish and English. We trust that this presentation will make information on this unique language accessible to a wider audience than other publications have made or will make.

This article utilizes a practical orthography that has been in use, with slight modifications, for more than forty years. The following tables give a simplified explanation of the meaning of the symbols.[2] While an accent is not typically used in Seri literature, in the dictionary it is included on words that are accented on a non-initial syllable.

Consonants

Practical	p	t	c, qu	cö	f	l	s	z	j	öj	x	xö	m	n	l̲[3]	r[4]	h	y
IPA	p	t	k	k^w	ɸ	ɬ	s	ʃ	x	x^w	χ	$χ^w$	m	n	l	ɾ	ʔ	j

Vowels

Practical	a, aa	e, ee	i, ii	o, oo
IPA	ɑ, ɑ:	æ, æ:	i, i:	o, o:

[1] Many people have contributed data and helped in various ways with the contents of this article. We gratefully acknowledge the recent input of María Luisa Astorga de Estrella and Lorenzo Herrera Casanova. We also thank Monina Watson for her gracious help in checking the Spanish translations. We take responsibility for all remaining errors and deficiencies.

[2] A discussion of Seri phonetics is given in Moser and Moser 1965; discussion of the phonology of Seri may be found in Marlett 1981 and Marlett 1988.

[3] This sound rarely occurs, and primarily in archaic words.

[4] This sound occurs in a few loanwords.

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41
Online. URL: http://www.und.nodak.edu/dept/linguistics/wp/1997Moser-Marlett.pdf
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In §2 (Seri-Spanish-English), the major classes of nouns are simple (simply presented as *s*), possessed (*s pos*), and kinship terms (*s par*). Possessed nouns and kinship terms are presented in the third person in the dictionary. (Possessed nouns and kinship terms have slightly different morphological properties.) They may also appear in a form that does not indicate the possessor (the absolutive, *abs*). Nouns may also be derived from verbs; many of these are possessed nouns.

A few verbs are also included in this portion of the dictionary. The verbs are intransitive (*vi*), or transitive (*vt*), or 'detransitivized' (*vd*)—intransitive verbs which are formed on transitive roots, or derived (*v der*)—verbs which are formed on noun roots and may be transitive or intransitive.

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Seri Dictionary: People and Kinship Terms

Section 1: English-Seri

American **mericáana, ziix xepe iti quiih**

ancestors **hantx mocat, xica iyat cöiyácapoj**

Apache **hapats, ziix haamxö quihit** *(arch.)*

aunt

- father's sister **ayáac** *(pos.)*, **hayáacat** *(abs.)*, **quiyáacat** *(have as ~)*
- mother's older sister **atmáhaj** *(pos.)*, **hatmáhaj** *(abs.)*, **quitmáhaj** *(have as ~)*
- mother's younger sister **antáac** *(pos.)*, **hantáacat** *(abs.)*, **quintáacat** *(have as ~)*

baby **zaxt quisíil, hoee** *(newborn)*, **ziix cmotómn** *(unborn)*, **ziix iti coomam** *(stillborn) See:* fetus

bachelor **ctam cazojéecoj** *(older)*

boy **zaxt quisil ctam, ziix quisíil ctam, ctam cmaapa caii** *(adolescent)*

brother

- older brother **axíiha** *(pos.)*, **haxíihat** *(abs.)*, **quixíihat** *(have as ~)*
- older brother of man **anyáac** *(pos.)*, **hanyáacat** *(abs.)*, **quinyáacat** *(have as ~)*
- younger brother of man **azcz** *(pos.)*, **hapézcaz** *(abs.)*, **quizcaz** *(have as ~)*
- older brother of woman **amáac** *(pos.)*, **hamáacat** *(abs.)*, **quimáacat** *(have as ~)*
- younger brother of woman **acaz** *(pos.)*, **hapéquez** *(abs.)*, **quequez** *(have as ~)*
- sibling **oyácj** *(pos.)*
- deceased sibling of woman **ziix atoyácj** *(pos.)*
- deceased sibling of man **ziix atinyác** *(pos.)*

brother-in-law

- woman's husband's younger brother **aquéetz** *(pos.)*, **haquéetz** *(abs.)*, **quiquéetz** *(have as ~)*
- woman's husband's older brother **acméhej** *(pos.)*, **hacméhej** *(abs.)*, **quicméhej** *(have as ~)*
- woman's older sister's husband **acáitz** *(pos.)*, **hacáitz** *(abs.)*, **quicáitz** *(have as ~)*
- woman's younger sister's husband **atcmajéem** *(pos.)*, **hatcmajéem** *(abs.)*, **quitcmajéem** *(have as ~)*
- man's sister's husband **actám cöcaii** *(pos.)*, **hactám cöcaii** *(abs.)*, **quictám cöcaii** *(have as ~)*
- man's wife's sister's husband **atalxícom** *(pos.)*, **hatalxícom** *(abs.)*, **quitalxícom** *(have as ~)*
- man's wife's brother **aquéemot** *(pos.)*, **haquéemot** *(abs.)*, **quiquéemot** *(have as ~)*

child **yaazi** *(his)*, **iiquet** *(her)*, **ziix itlén oah** *(deceased)*, **hapáazi íi, cmique íi, iiquet íi, quihs** *(arch., firstborn)*, **itóozj quih iháamlcam** *(last child, pos.)*, **yaapos** *(arch.)*, **coméx hapéquet** *(illegitimate)*, **coméx quiiquet** *(have illegitimate ~)*, **itix heeque** *(of person who has been married more than once)*

coparent **icompáar** *(pos.)*, **hacompáar** *(abs.)*

cousin **aamo oyácj** *(pos.)*

- woman's female cousin **azáac** *(daughter of parent's older sibling)*, **atcz** *(daughter of parent's younger sibling)*

- woman's male cousin **axíiha** *(son of parent's older sibling)*, **acaz** *(son of parent's younger sibling)*
- man's female cousin **(aamo) apáac** *(daughter of parent's older sibling)*, **acóome** *(daughter of parent's younger sibling)*
- man's male cousin **axíiha** *(son of parent's older sibling)*, **azcz** *(son of parent's younger sibling)*

daughter

- daughter of man **eec** *(pos.)*, **heequet** *(abs.)*
- daughter of woman *See:* child

daughter-in-law **acámaz** *(pos.)*, **hacámaz** *(abs.)*, **quicámaz** *(have as ~)*, **ziix cmotómn quipnáil icot quiih hipquih** *(deceased)*

descendant **iyat cöcoocp**

family **haméen, oen** *(his)*, **hapén tazo** *(of a man, possibly with different mothers)*, **xica quiistox pti iqui haméen tazo**

father **iti miha**

- father of man **ai** *(pos.)*, **hapée** *(abs.)*, **queaa** *(have as ~)*
- father of woman **am** *(pos.)*, **hapéme** *(abs.)*, **quima** *(have as ~)*
- father *("old man")* **cmaacoj**
- with the same father **iqui ipázi**
- deceased father **ziix iti miha ctam**

father-in-law

- father-in-law of man **aaquéect ctam** *(pos.)*, **haaquéect ctam** *(abs.)*, **quequéect** *(have as ~)*
- father-in-law of woman **aquépez** *(pos.)*, **haquépez** *(abs.)*, **quiquépez** *(have as ~)*

female **cmaam**

fetus **ziix cmotómn** *(unborn)*, **zaxt quisíil hasxéen oo coom** *(before leaving the womb)*, **zaxt quisíil hapx hant coit** *(after leaving the womb)*

fiancé

- have as fiancé **quihíin coom, ihíin coom**
- fiancée **ihíin iic coom**
- be engaged **heme cöquiin**

friend **hamíigo**

genealogy **pti iyat cöcoocp**

giant *(legendary)* **ziix coosyat, Hant Ihiyáx iic ctam, Hant Ihiyáx iic cmaam, nasyat** *(arch.)*

girl **zaxt quisil cmaam, ziix quisíil cmaam, zacáam**

- girl for whom the puberty fiesta is held **ziix cöima**

grandchild

- woman's daughter child **acáac** *(pos.)*, **hacáac** *(abs.)*, **quicáacat** *(have as ~)*
- woman's son's child **acáasac** *(pos.)*, **hacáasac** *(abs.)*, **quicáasac** *(have as ~)*
- man's daughter's child **aquézi** *(pos.)*, **haquézi** *(abs.)*, **quiquézi** *(have as ~)*
- man's son's child **aquípaz** *(pos.)*, **haquípaz** *(abs.)*, **quiquípaz** *(have as ~)*

grandfather

- mother's father **aaz** *(pos.)*, **hapéez** *(abs.)*, **queaz** *(have as ~)*
- father's father **apaz** *(pos.)*, **hapépez** *(abs.)*, **quipaz** *(have as ~)*
- deceased grandparent **ziix yacáii (caixaj)**

grandmother

- mother's mother **act** *(of woman)*, **hapéct** *(abs.)*, **quict** *(have as ~)*
- father's mother **amaz** *(pos.)*, **hapémez** *(abs.)*, **quimaz** *(have as ~)*
- deceased grandparent **ziix yacáii (caixaj)**

Guaymas people **xnaa motat**

gypsy **ziix ipnáil cacöla, ziix ipnáil cmoosa**

husband **cmaacoj** *(informal) See:* spouse

Indians **xica comcáac cmis** *(not Seri)*

male **ctam**

- be male **-ctamot**

man **ctam**

- young man **ctam cmaa caii, siip, zcaxt** *(arch.)*
- old man **cmaacoj**

Mexican **cocsar** *(non-Indian)*

midget **haitoj**

mother **iti miha** *(pos.)*, **ata** *(pos.)*, **hapéte** *(abs.)*, **quita** *(have as ~)*, **quiiquet** *(be ~ of)*, **itléno quih** *(of dead child)*

- with the same mother **iqui ipéquet**
- deceased mother **ziix iti miha cmaam**
- unmarried mother **coméx quim**

mother-in-law

- mother-in-law of woman **aquémez** *(pos.)*, **haquémez** *(abs.)*, **quiquémez** *(have as ~)*
- mother-in-law of man **aaquéect cmaam** *(pos.)*, **haaquéect cmaam** *(abs.)*, **quequéect** *(have as ~)*

nephew, niece

- woman's older sister's child **apxaz** *(pos.)*, **hapépxez** *(abs.)*, **quipxaz** *(have as ~)*
- woman's younger sister's child **atcamáhaj** *(pos.)*, **hatcamáhaj** *(abs.)*, **quitcamáhaj** *(have as ~)*
- woman's brother's child **azóoc** *(pos.)*, **hazóocat** *(abs.)*, **quizóocat** *(have as ~)*
- man's sister's child **aac** *(pos.)*, **haacat** *(abs.)*, **queac** *(have as ~)*
- man's younger brother's child **acmáhaj** *(pos.)*, **hacmáhaj** *(abs.)*, **quicmáhaj** *(have as ~)*
- man's older brother's child **aquíitaz** *(pos.)*, **haquíitaz** *(abs.)*, **quiquíitaz** *(have as ~)*

O'odham **hapáai, mopáii** *(arch.)*, **coiitoj** *(arch.)*

orphan **patix coit, ziix heme icot cöcomsisíin**

outsider **cocsar** *(especially Mexican)*

people **xica quih quiistox, comcáac** *(especially Seri)*

person **ziix quiisax, cmique** *(especially Seri)*, **cooptim** *(arch.)*

- deceased person **ziix caixaj** *(older than one)*, **ziix cmotómn** *(younger than one)*

pregnant **quiiquet**

relatives **azmiiyat** *(pos.)*, **iha ocóa** *(pos.)*, **xica quihíin cayáxi**

San Esteban person **hast ano ctam** *(male)*, **hast ano cmaam** *(female)*, **xica hast ano coii** *(plural)*

Seri **cmique, comcáac** *(plural)*

- group of Seris who lived in shelters made of driftwood **pailc haacöt**

sister

- man's older sister **apáac** *(pos.)*, **hapáacat** *(abs.)*, **quipáacat** *(have as ~)*
- man's younger sister **acóome** *(pos.)*, **hacóome** *(abs.)*, **quicóomet** *(have as ~)*
- woman's older sister **azáac** *(pos.)*, **hazáacat** *(abs.)*, **quizáacat** *(have as ~)*
- woman's younger sister **atcz** *(pos.)*, **hapétcaz** *(pos.)*, **quitcaz** *(have as ~)*
- sibling **oyácj** *(pos.)*, **cyacj** *(have ~)*
- deceased sibling of woman **ziix atoyácj** *(pos.)*
- deceased sibling of man **ziix atinyác** *(pos.)*

sister-in-law

- woman's brother's wife **acoáac** *(pos.)*, **hacoáacat** *(abs.)*, **quicoáacat** *(have as ~)*
- woman's husband's brother's wife **alxcmáam** *(pos.)*, **halxcmáam** *(abs.)*, **quilxcmáam** *(have as ~)*
- woman's husband's sister **aquéec** *(pos.)*, **haquéequet** *(abs.)*, **quiquéequet** *(have as ~)*
- man's wife's younger sister **amaquéte** *(pos.)*, **hamaquéte** *(abs.)*, **quimaquéte** *(have as ~)*
- man's wife's older sister **acmajéete** *(pos.)*, **hacmajéete** *(abs.)*, **quicmajéete** *(have as ~)*
- man's older brother's wife **acatazáta** *(pos.)*, **hacatazáta** *(abs.)*, **quicatazáta** *(have as ~)*
- man's younger brother's wife **acmajéete** *(pos.)*, **hacmajéete** *(abs.)*, **quicmajéete** *(have as ~)*

son

- son of man **asáac** *(pos.)* **hasáacat** *(abs.)*, **quisáacat** *(have as ~)*
- son of woman *See:* child

son-in-law **acacám** *(pos.)*, **hacacáma** *(abs.)*, **quicacáma** *(have as ~)*, **ziix cmotómn icot quiih hipquih** *(deceased)*

Spaniard **casópin** *(arch.; variant:* **cazópim***)*

spouse **aal** *(pos.)*, **ziix ihax iicx ihíih** *(deceased)*, **ziix yacái** *(deceased)*

stepchild **acomíique** *(pos.)*, **hacomíiquet** *(abs.)*, **quicomíiquet** *(have as ~)*

Tastiota people **xica xnai iicp coii**

Tiburon Island people **Tahéöjc comcáac**, **hatquísa**

- group of people within the Tiburón Island people group **xoxáacöl**
- center of Tiburon Island people **heno comcáac**

twin **hahóocj**

- give birth to twins **cahóocj**

uncle

- father's younger brother **aitz** *(pos.)*, **hapéetz** *(abs.)*, **quiitz** *(have as ~)*
- father's older brother **amáhaj** *(pos.)*, **hamáhaj** *(abs.)*, **quimáhaj** *(have as ~)*
- mother's brother **azmíi** *(pos.)*, **hazmíi** *(abs.)*, **quizmíit** *(have as ~)*
- mother's brother *(little used term)* **axáac** *(pos.)*, **haxáacat** *(abs.)*, **quixáacat** *(have as ~)*

widow **cmaam ihómac quiih**

wife

- have second ~ **cöcayácj** *See:* spouse

woman **cmaam**, **ziix quipnáil**, **cmajéaajoj** *(arch.)*

- young woman **zacáam** *(unmarried)*
- old woman **comcáii**

Yaqui **yequim**, **ziix coopoquim** *(arch.)*

Seri Dictionary: People and Kinship Terms

Section 2: Seri-Spanish-English

aac *s par 1* sobrino, sobrina (hijo o hija de la hermana de él) [nephew, niece (his sister's child)] *2* sobrino nieto, sobrina nieta (hijo o hija de la prima de él) [grandnephew, grandniece (his cousin's child)] [*pl.* **aacla** (de él), **aacloj** (de ellos); **haacat** sobrino o sobrina (de un hombre); **heac** mi sobrino o sobrina] *Véase también* **queac** tener como sobrino o sobrina.

aal *s par 1* esposo (de ella), esposa (de él) [her husband, his wife] [*pl.:* **aala**; **hiyal** mi esposo, mi esposa; **maal** tu esposo, tu esposa] *2* macho (de animal) [mate (of female animal)] **Haxz cmaam himcac ano caap quih aaliha.** Es el macho de esa perra que está allí. [It is the mate of that (female) dog over there.] *De* **ical** acompañar.

- **aal íi** *s par* primera esposa (de él), primer esposo (de ella) [his first wife, her first husband]

aalc *s par pl* abuelos (de él o de ella) [his or her grandparents] *Véase* **aaz**.

aamo apáac *s par* prima (de él) [his (female) cousin] (*Lit.*: hermana mayor lejana.)

aamo oyácj *s der pos* primo, prima (de él o de ella) [his or her cousin] (*Lit.*: hermano, hermana distante; *véase* **oyácj** hermano o hermana.)

aaquéect *s par 1* suegro, suegra (de él) [his father-in-law, mother-in-law] *2* tío o tía de su esposa [his wife's uncle or aunt] [*pl.:* **aaquéecla** (de él), **aaquéecloj** (de ellos); **haaquéect** suegro (de un hombre); **heequéect** mi suegro] *Véase también* **quequéect** tener como suegro, suegra.

- **aaquéect cmaam** *s par 1* suegra [his mother-in-law] *2* tía de su esposa [his wife's aunt]
- **aaquéect ctam** *s par 1* suegro [father-in-law] *2* tío de su esposa [his wife's uncle]

aaz *s par 1* abuelo (padre de su madre) [grandfather (his or her mother's father)] *2* tío abuelo (hermano del padre de su madre) [great-uncle (his or her mother's father's brother)] *3* esposo de la hermana del padre de su madre [his or her mother's father's sister's husband] [*pl.:* **aalc** (de él o de ella), **aalcoj** (de ellos o de ellas); **hapéez** abuelo (de un hombre o de una mujer), **heaz** mi abuelo] *Véase también* **queaz** tener como abuelo.

acacám *s par 1* yerno (de él o de ella) [his or her son-in-law] *2* esposo de su sobrina [his or her niece's husband] *3* esposo de la sobrina nieta de sus padres [his or her parent's grandniece's husband] [*pl.:* **acacámta** (de él o de ella), **acacámtolca** (de ellos o de ellas); **hacacáma** yerno (de un hombre o de una mujer), **hicacám** mi yerno] *Véase también* **quicacáma** tener como yerno.

acalc *s par pl* hermanos menores (de ella) [her younger brothers] *Véase* **acaz**.

acatazáta *s par 1* cuñada (esposa del hermano mayor de él) [sister-in-law (his older brother's wife)] *2* esposa del nieto o bisnieto (de él) [his grandson's or great-grandson's wife] *3* esposa del primo (esposa del hermano o hermana mayor de los padres de él) [wife of his (male) cousin (his parent's older sibling's wife)] *4* esposa del sobrino nieto o sobrino bisnieto de los padres (de él) [his parent's grandnephew or great-grandnephew's wife] [*pl.:* **acatazátoj** (de él o de ellos); **hacatazáta** cuñada (de un hombre)] *Véase también* **quicatazáta** tener como cuñada.

acatj *s par pl* tías abuelas (de él o de ella)

[his or her great-aunts] *Véase* **act**.

acaz *s par 1* hermano menor (de ella) [her younger brother] *2* bisabuelo (de ella) [her great-grandfather] *3* primo (hijo del hermano o hermana menor de los padres de ella) [cousin (son of her parent's younger sibling)] [*pl.:* **acalc** (de ella), **acalcoj** (de ellas); **hapéquez** hermano menor (de una mujer), **hicaz** mi hermano menor] *Véase también* **quequez** tener como hermano menor.

acmáhaj *s par 1* sobrino, sobrina (hijo o hija del hermano menor de él) [nephew, niece (his younger brother's child)] *2* nieto, nieta del hermano o hermana menor de los padres de él [nephew, niece of his parent's younger sibling] [*pl.:* **acmáhalc** (de él), **acmáhalcoj** (de ellos); **hacmáhaj** sobrino, sobrina (de un hombre)] *Véase también* **quicmáhaj** tener como sobrino o sobrina.

acmajéete *s par 1* cuñada (hermana mayor de su esposa) [sister-in-law (his wife's older sister)] *2* cuñada (esposa del hermano menor de él) [sister-in-law (his younger brother's wife)] *3* esposa de su primo (esposa del hijo del hermano o hermana menor de los padres de él) [his cousin's wife (wife of the son of his parent's younger sibling)] [*pl.:* **acmajéetoj** (de él), **acmajéetoj** (de ellos); **hacmajéete cuñada** (de un hombre)] *Véase también* **quicmajéete** tener como cuñada.

acméhej *s par 1* cuñado (hermano mayor de su esposo) [brother-in-law (her husband's older brother)] *2* hijo del hermano o hermana mayor de los suegros (de ella) [son of the older sibling of her parents-in-law] [*pl.:* **acméhelc** (de él), **acméhelcoj** (de ellos); **hacméhej** cuñado (de una mujer)] *Véase también* **quicméhej** tener como cuñado.

acoáac *s par 1* cuñada (esposa del hermano de ella) [sister-in-law (wife of her brother)] *2* esposa del nieto o bisnieto (de ella) [wife of her grandson or great-grandson] *3* esposa del primo (de ella) [her cousin's wife] *4* esposa del nieto o bisnieto del primo (de ella) [wife of her (male) cousin's grandson or great-grandson] [*pl.:* **acoáacla** (de ella), **acoáacloj** (de ellas); **hacoáacat** cuñada (de una mujer)] *Véase también* **quicoáacat** tener como cuñada.

acomíique *s par* hijastro, hijastra (de él o de ella) [his or her stepson or stepdaughter] [*pl.:* **acomíicto** (de él o de ella), **acomíictoj**, **acomíiquelc** (de ellos o de ellas); **hacomíiquet** hijastro, hijastra (de un hombre o de una mujer)] *Se relaciona históricamente con* **iiquet** su hijo, su hija. *Véase también* **quicomíiquet** tener como hijastro o hijastra.

acáac *s par 1* nieto, nieta (hijo o hija de la hija de ella) [grandson, granddaughter (her daughter's child)] *2* sobrino nieto, sobrina nieta (hijo o hija de la sobrina de ella) [great-grandnephew, great-grandniece (her niece's child)] *3* bisnieto, bisnieta del hermano o hermana menor de los padres (de ella) [her parent's younger sibling's great-grandchild] [*pl.:* **acáacla** (de ella), **acáacloj** (de ellas); **hacáac** nieto, nieta (de una mujer)] *Véase también* **quicáacat** tener como nieto o nieta.

acáasac *s par 1* nieto, nieta (hijo o hija del hijo de ella) [grandson, granddaughter (her son's child)] *2* sobrino nieto, sobrina nieta (hijo o hija del sobrino de ella) [grandnephew, grandniece (her nephew's child)] *3* bisnieto, bisnieta del hermano o hermana mayor de los padres (de ella) [her parent's older sibling's great-grandchild] [*pl.:* **acáasajc** (de ella), **acáasajoj**, **acáasalca** (de ellas); **hacáasac** nieto, nieta (de una mujer)] *Véase también* **quicáasac** tener como nieto o nieta.

acáitz *s par 1* cuñado (esposo de la hermana mayor de ella) [brother-in-law (husband of her older sister)] *2* esposo de la nieta o bisnieta (de ella) [husband of her granddaughter or great-granddaughter] *3* esposo de su prima (yerno del hermano o hermana mayor de los padres de ella) [husband of her (female) cousin (her parent's older sibling's son-in-law)]

4 esposo de la sobrina nieta o sobrina bisnieta de los padres (de ella) [husband of her parent's grandniece or great-grandniece] [*pl.:* **acáitalca** (de ella), **acáitalcoj** (de ellas); **hacáitz** cuñado (de una mujer)] *Véase también* **quicáitz** tener como cuñado.

acámaz *s par 1* nuera (de él o de ella) [his or her daughter-in-law] *2* esposa del sobrino (de él o de ella) [wife of his or her nephew] *3* esposa del sobrino nieto de los padres (de él o de ella) [wife of his or her parent's grandnephew] [*pl.:* **acámalc** (de él o de ella), **acámalcoj** (de ellos o de ellas); **hacámaz** nuera (de un hombre o de una mujer)] *Véase* **quicámaz** tener como nuera.

acóome *s par 1* hermana menor (de él) [his younger sister] *2* bisabuela (de él) [his great-grandmother] *3* prima (hija del hermano o hermana menor de los padres de él) [cousin (daughter of his parent's younger sibling)] [*pl.:* **acóomc** (de él o de ellos); **hacóome** hermana menor (de un hombre)] *Véase* **quicóomet** tener como hermana menor.

act *s par 1* abuela (madre de su madre) [grandmother (mother of her mother)] *2* tía abuela (hermana de la madre de su madre) [great-aunt (sister of her mother's mother)] *3* esposa del hermano de la madre de su madre [wife of her mother's mother's brother] [*pl.:* **acatj** (de él o de ella, o de ellos o de ellas); **hapéct** abuela (de un hombre o de una mujer), **hict** mi abuela] *Véase también* **mosnáct** tortolita, **quict** tener como abuela.

actám cöcaii *s par 1* cuñado (esposo de la hermana de él) [brother-in-law (husband of his sister)] *2* esposo de la nieta o bisnieta (de él) [husband of his granddaughter or great-granddaughter] *3* esposo de la prima (de él) [husband of his cousin] *4* esposo de la sobrina nieta o sobrina bisnieta de los padres (de él) [husband of his parent's grandniece or great-grandniece] [*pl.:* **actám cöqueej** (de él), **actám cöqueelcoj** (de ellos); **hactám cöcaii** cuñado (de un hombre)] *Véase también* **quictám cöcaii** tener como cuñado. *Se relaciona históricamente con* **caii** maduro.

ai *s par* padre (de él) [his father] [*pl.:* **aita** (de él o de ellos); **hapée** padre (de un hombre), **hii** mi padre] *Véase también* **queaa** tener como padre.

aitz *s par* tío (hermano menor de su padre) [uncle (father's younger brother)] [*pl.:* **aitalca** (de él o de ella), **aitalcoj** (de ellos o de ellas); **hapéetz** tío (de un hombre o de una mujer)] *Véase también* **quiitz** tener como tío.

alxcmáam *s par 1* concuña (esposa del hermano de su esposo) [sister-in-law (her husband's brother's wife)] *2* esposa del tío abuelo de su esposo [her husband's great-uncle's wife] *3* esposa del primo de su esposo [her husband's cousin's wife] [*pl.:* **alxcmajíic** (de él o de ella, o de ellos o de ellas); **halxcmáam** concuña (de un hombre o de una mujer), **hilxcmáam** mi concuña] *Véase también* **quilxcmáam** tener como concuña.

am *s par* padre (de ella) [her father] Hapéme quij ziix impáxpxiha. Una no se enoja con su padre. [One should not get angry with one's father.] [*pl.:* **amta** (de ella o de ellas); **hapéme** padre (de una mujer); **him** mi padre] *Véase también* **quima** tener como padre.

amáac *s par* hermano mayor (de ella) [her older brother] [*pl.:* **amáaclam** (de ella), **amáacloj** (de ellas); **hamáacat** hermano mayor (de una mujer)] *Véase también* **quimáacat** tener como hermano mayor.

amáhaj *s par* tío (hermano mayor de su padre) [uncle (her father's older brother)] [*pl.:* **amáhalc** (de él o de ella), **amáhalcoj** (de ellos o de ellas); **hamáhaj** tío (de un hombre o de una mujer)] *Véase también* **quimáhaj** tener como tío.

amalc *s par pl* tías abuelas (de él o de ella) [his or her great-aunts] *Véase* **amaz**.

amaquéte *s par 1* cuñada (hermana menor de

su esposa) [sister-in-law (his wife's younger sister)] *2* abuela o bisabuela, o tía abuela de su esposa [grandmother or great-grandmother or great-aunt of his wife] *3* hija del hermano o hermana menor de los suegros (de él) [daughter of the younger sibling of his parents-in-law] [*pl.:* **amaquétoj** (de él o de ellos); **hamaquéte** cuñada (de un hombre)] *Véase también* **quimaquéte** tener como cuñada.

amaz *s par 1* abuela (madre de su padre) [grandmother (father's mother)] *2* tía abuela (hermana de la madre de su padre) [great-aunt (father's mother's sister)] *3* esposa del hermano de la madre de su padre [father's mother's brother's wife] [*pl.:* **amalc** (de él o de ella), **amalcoj** (de ellos o de ellas); **hapémez** abuela (de un hombre o de una mujer), **himaz** mi abuela] *Véase también* **quimaz** tener como abuela.

amta *s par pl* padres (de ellas) [their fathers] *Véase* **am**.

antáac *s par* tía (hermana menor de su madre) [aunt (mother's younger sister)] [*pl.:* **antáacla** (de él o de ella, o de ellos o de ellas); **hantáacat** tía (de un hombre o de una mujer)] *Véase también* **quintáacat** tener como tía.

anyáac *s par* hermano mayor (de él) [his older brother] [*pl.:* **anyáacla** (de él o de ellos); **hanyáacat** hermano mayor (de un hombre)] *Véase también* **quinyáacat** tener como hermano mayor.

apáac *s par 1* hermana mayor (de él) [his older sister] *2* bisnieta (de él) [his great-granddaughter] *3* prima (hija del hermano o hermana mayor de los padres de él) [his cousin (his parent's older sibling's daughter)] *4* hija del tataranieto o tataranieta de los tíos (de él) [his aunt and uncle's great-great-grandchild's daughter] [*pl.:* **apáacla** (de él o de ellos); **hapáacat** hermana mayor (de un hombre), **hipáac** mi hermana mayor] *Véase también* **quipáacat** tener como hermana mayor.

apaz *s par 1* abuelo (padre de su padre) [grandfather (father's father)] *2* tío abuelo (hermano del padre de su padre) [great-uncle (father's father's brother)] *3* esposo de la hermana del padre de su padre [father's father's sister's husband] [*pl.:* **apalc** (de él o de ella), **apalcoj** (de ellos o de ellas); **hapépez** abuelo (de un hombre o de una mujer), **hipaz** mi abuelo] *De* **quipaz** tener como abuelo.

apxaz *s par 1* sobrino, sobrina (hijo o hija de la hermana mayor de ella) [nephew, niece (her older sister's child)] *2* sobrino nieto, sobrina nieta (hijo o hija de la hija del hermano o hermana mayor de los padres de ella) [great-nephew, great-niece (her parent's older sibling's daughter's child)] [*pl.:* **apxalc** (de ella), **apxalcoj** (de ellas); **hapépxez** sobrino o sobrina (de una mujer), **hipxaz** mi sobrino o sobrina] *Véase también* **quipxaz** tener como sobrino o sobrina.

aquéec *s par 1* cuñada (hermana de su esposo) [sister-in-law (husband's sister)] *2* abuela o bisabuela o tía abuela de su esposo [husband's grandmother or great-grandmother or great-aunt] *3* prima de su esposo [husband's (female) cousin] [*pl.:* **aquéecla** (de ella), **aquéecloj** (de ellas); **haquéequet** cuñada (de una mujer)] *Véase también* **quiquéequet** tener como cuñada.

aquéemot *s par 1* cuñado (hermano de su esposa) [brother-in-law (wife's brother)] *2* abuelo o bisabuelo, o tío abuelo de su esposa [wife's grandfather or great-grandfather or great-uncle] *3* primo de su esposa [wife's (male) cousin] [*pl.:* **aquéemolca** (de él), **aquéemolcoj** (de ellos); **haquéemot** cuñado (de un hombre)] *Véase también* **quiquéemot** tener como cuñado, **zaah aquéemot** especie de pez.

aquéetz *s par 1* cuñado (hermano menor de su esposo) [brother-in-law (husband's younger brother)] *2* abuelo, bisabuelo, tío abuelo de su esposo [husband's grandfather or great-grandfather or great-uncle] *3* hijo del hermano o hermana menor de los suegros (de ella) [son of the younger

siblings of her parents-in-law] [*pl.:* **aquéetalca** (de ella o de ellas); **haquéetz** cuñado (de un hombre)] *Véase también* **quiquéetz** tener como cuñado.

aquémez *s par 1* suegra (de ella) [her mother-in-law] *2* tía de su esposo [husband's aunt] [*pl.:* **aquémelc** (de ella), **aquémelcoj** (de ellas); **haquémez** suegra (de una mujer)] *Véase también* **quiquémez** tener como suegra.

aquépez *s par 1* suegro (de ella) [her father-in-law] *2* tío de su esposo [husband's uncle] [*pl.:* **aquépelc** (de ella), **aquépelcoj** (de ellas); **haquépez** suegro (de un hombre)] *Véase también* **quiquépez** tener como suegro.

aquézi *s par 1* nieto, nieta (hijo o hija de la hija de él) [grandson, granddaughter (his daughter's child)] *2* sobrino nieto, sobrina nieta (hijo o hija de la sobrina de él) [grand nephew, grand niece (his niece's child)] *3* bisnieto, bisnieta del hermano o hermana menor de los padres (de él) [great-grandson, great-granddaughter of his parent's younger sibling] [*pl.:* **aquézilc** (de él), **aquézilcoj** (de ellos); **haquézi** nieto, nieta (de un hombre)] *Véase también* **quiquézi** tener como nieto o nieta.

aquíitaz *s par 1* sobrino, sobrina (hijo o hija del hermano mayor de él) [nephew, niece (his older brother's child)] *2* nieto, nieta del hermano o hermana mayor de sus padres (de él) [grandson, granddaughter of his parent's older brother or sister] [*pl.:* **aquíitalc** (de él), aquíitalcoj (de ellos); **haquíitaz** sobrino o sobrina (de un hombre)] *Véase también* **quiquíitaz** tener como sobrino o sobrina.

aquípaz *s par 1* nieto, nieta (hijo o hija del hijo de él) [grandson, granddaughter (his son's child)] *2* sobrino nieto, sobrina nieta (hijo o hija del sobrino de él) [great-nephew, great-niece (his nephew's child)] *3* bisnieto o bisnieta del hermano o hermana mayor de los padres (de él) [grandson or granddaughter of his parent's older sibling] [*pl.:* **aquípalc** (de él), **aquípalcoj** (de ellos); **haquípaz** nieto, nieta (hijo o hija del hijo de un hombre)] *Véase también* **quiquípaz** tener como nieto o nieta.

asáac *s par* hijo (de él) [his son] [*pl.:* **asáacla** (de él), **asáacloj** (de ellos); **hasáacat** hijo (de un hombre)] *Véase también* **oot asáac** especie de pez, **quisáacat** tener como hijo.

ata *s par* madre (de él o de ella) [his or her mother] Hapéte quih mizj cmique caaiha. Una madre le hace bien a la gente. [A mother does good things for people.] [*pl.:* **atoj**; **hapéte** madre (de un hombre o de una mujer), **hita** mi madre] *Véase también* **quita** tener como madre.

atalxícom *s par 1* concuño (esposo de la hermana de su esposa) [brother-in-law (his wife's sister's husband)] *2* esposo de la prima de su esposa [his wife's cousin's husband] [*pl.:* **atalxícomjc** (de él), **atalxícomjoj** (de ellos); **hatalxícom** concuño (de un hombre)] *Véase también* **quitalxícom** tener como concuño.

atcal *s par* hermanas menores (de ella) [her younger sisters] *Véase* **atcz**.

atcamáhaj *s par 1* sobrino, sobrina (hijo o hija de la hermana menor de ella) [nephew, niece (her younger sister's child)] *2* sobrino nieto, sobrina nieta (hijo o hija de la hija del hermano o hermana menor de sus padres) [great-nephew, great-niece (her parent's younger sibling's daughter's child)] [*pl.:* **atcamáhalc** (de ella), atcamáhalcoj, **atcamáhzil** (de ellas); **hatcamáhaj** sobrino o sobrina (de una mujer); **hitcamáhaj** mi sobrino o sobrina] *Véase también* **quitcamáhaj** tener como sobrino o sobrina.

atcmajéem *s par 1* cuñado (esposo de la hermana menor de ella) [her brother-in-law (her younger sister's husband)] *2* esposo de su prima (yerno del hermano o hermana menor de los padres de ella) [husband of her cousin (son-in-law of her parent's younger sibling)] [*pl.:* **atcmajéemtaj** (de ella), **atcmajéemtolca** (de ellas); **hat-**

cmajéem cuñado (de una mujer)] *Véase también* **quitcmajéem** tener como cuñado.

atcz *s par 1* hermana menor (de ella) [her younger sister] *2* bisabuela (de ella) [her great-grandmother] *3* prima (hija del hermano o hermana menor de los padres de ella) [(female) cousin (her parent's younger sibling's daughter)] [*pl.:* **atcal** (de ella), **atcalcoj** (de ellas); **hapétcaz** hermana menor (de una mujer)] *Véase también* **quitcaz** tener como hermana menor.

atmáhaj *s par* tía (hermana mayor de su madre) [aunt (mother's older sister)] [*pl.:* **atmáhalc** (de él o de ella), **atmáhalcoj** (de ellos o de ellas); **hatmáhaj** tía (de un hombre o de una mujer)] *Véase también* **quitmáhaj** tener como tía.

atoj *s par pl* sus madres [their mothers] *Véase* **ata**.

axáac *s par* tío (hermano de su madre, de poco uso) [uncle (mother's brother, little used)] [pl: **axáacla** (de él o de ella, o de ellos o de ellas); **haxáacat** tío (de un hombre o de una mujer)] Sinón.: **hizmíi**. *Véase también* **quixáacat** tener como tío.

axíiha *s par 1* hermano mayor (de él o de ella) [his or her older brother] *2* bisnieto (de él o de ella) [his or her great-grandson] *3* primo (hijo del hermano o hermana mayor de sus padres) [cousin (son of his or her parent's older sibling)] *4* bisnieto del hermano o hermana mayor de sus padres [great-grandson of his or her parent's older sibling] [*pl.:* **axíihla** (de él o de ella, o de ellos o de ellas); **haxíihat** hermano mayor (de un hombre o de una mujer)] *Véase también* **quixíihat** tener como hermano mayor.

ayáac *s par* tía (hermana de su padre) [aunt (father's sister)] [*pl.:* **ayáacla** (de él o de ella), **ayáacloj** (de ellos o de ellas); **hayáacat** tía (de un hombre o de una mujer), **ihyáac** mi tía] *Véase también* **quiyáacat** tener como tía.

azáac *s par 1* hermana mayor (de ella) [her older sister] *2* bisnieta (de ella) [her great-granddaughter] *3* prima (hija del hermano o hermana mayor de los padres de ella) [cousin (daughter of the older sibling of her parents)] *4* sobrina bisnieta de los padres (de ella) [great-grandniece of her parents] [*pl.:* **azáacla** (de ella o de ellas); **hazáacat** hermana mayor (de una mujer)] *Véase también* **quizáacat** tener como hermana mayor.

azcz *s par 1* hermano menor (de él) [his younger brother] *2* bisabuelo (de él) [his great-grandfather] **Hapézcaz quih tpahoma hant iti tiijma ziix ittáctim sehe cöitcmáamax ihax impáii.** Cuando uno ve a su bisabuelo y ve que no puede hacer algo, le ayuda a hacerlo. [When one sees one's great-grandther and sees that he needs help, one helps him do it.] *3* primo (hijo del hermano o hermana menor de los padres de él) [cousin (his parents younger sibling's son)] [*pl.:* **azcal** (de él), **azcaloj** (de ellos); **hapézcaz** hermano menor (de un hombre)] *Véase también* **quizcaz** tener hermano menor.

azmíi *s par 1* tío (hermano de su madre) [uncle (mother's brother)] *2* (en plural) parientes (de él o de ella) [(when plural) his or her relatives] [*pl.:* **azmíiyat** (de él o de ella, o de ellos o de ellas); **hazmíi** tío (de un hombre o de una mujer)] *Véase también* **quizmíit** tener como tío.

azóoc *s par 1* sobrino, sobrina (hijo o hija del hermano de ella) [nephew, niece (her brother's child)] *2* hijo, hija del primo (de ella) [her (male) cousin's child] [*pl.:* **azóocla** (de ella o de ellas); **hazóocat** sobrino o sobrina (de una mujer)] *Véase también* **quizóocat** tener como sobrino o sobrina.

cahóocj *vc 1* dar a luz gemelos [twins (give birth to ~)] **Tiix sahóocj ca teeme.** Dice que va a tener gemelos. [She says that she is going to have twins.] **Juan quij hahóocjiha.** Juan es gemelo. [Juan is a twin.] *2* poner dos [put two] [**itahóocj**; **itahóocalcam**] *De* **coocj** dos. *Véase*

también **hahóocj** gemelo.

casópin *s esp* español (arc.; variante: **cazópim**) [Spaniard (arch.)]

cazópim *s esp* español (arc.) (variante: **casópin**) [Spaniard (arch.)] [*pl.:* **cazópim**]

cmaacoj *s* hombre de edad avanzada, anciano, padre, esposo (informal) [old man, father, husband (informal)] **¿Cmaacoj quih zimöj siifp queeya?** ¿Cuándo va a venir mi papá? [When is my father coming?] [*pl.:* **cmaacolam**, **cmaacöl**]

cmaam *s 1* mujer [woman] *2* hembra [female] **Haxz cmaam himcac ano caap quih aaliha.** Es el macho de esa perra que está allí. [It is the mate of that (female) dog over there.] [*pl.:* **cmajíic**]

cmaam cazojéecoj *s* soltera [unmarried woman]

cmaam ihómac quiih *s* viuda [widow] **Comcáii cmaam ihómac quiih ticap zixcam z iyoyáazi ziix quisíil ctam iiquet quih cöisaahit ta.** Esa viuda pidió un pescado para dar de comer a su hijo. [That widow claimed a fish to feed her son.]

cmajéaajoj *s* mujer (arc.) [woman (arch.)] Sinón.: **cmaam**.

cocsar *s* cualquiera persona del país que no es seri, extranjero, yori [person from Mexico who is not Seri, outsider, non-Indian Mexican] *Véase también* **cocsar yamáax** licor, **cocsar iitom** español (lengua).

coiitoj *s* pápago (arc.) [O'odham (arch.)] Sinón.: **hapáai**.

comcáac *s pl* gente gente seri [people, Seri people] *Véase* **cmique**.

comcáii *s* mujer de edad avanzada anciana [old woman] **¡Simet hizcoi comquéej ano nthoozi!** ¡Lleva este pan a las ancianas! [Take this bread to the old women!] [*pl.:* **comquéej**; *etim.:* **cmaam caii**, **cmaam queej**]

- **-comcáiit** *v der* ser vieja [old]

coméx quiiquet *vt* tener hijo ilegítimo [have illegitimate child] **Anxö iisax cheemt mos imoz cmeetiha iiquet quij coméx tiiquetma.** Estaba muy enojada y triste porque su hija tuvo un niño ilegítimo. [She was angry and sad because her daughter had an illegitimate child.]

- **coméx hapéquet** *s der* hijo ilegítimo [illegitimate child] **Cmaam tiquij coméx iicto quih coocjiha.** Esa mujer tiene dos hijos ilegítimos. [That woman has two illegitimate children.]
- **coméx quim** *s* madre no casada [unmarried mother]

cooptim *s* persona (arc.) [person (arch.)]

cöcayácj *vi* tener segunda esposa [have second wife] **Cmaam himintica cmaa xocáii xo icayácj yoocyo.** Esa mujer es joven, pero se dice que es su segunda esposa. [That woman is young but it is said that she is the second wife.] [**cötayácj**, **cötayácalcam**] *Se relaciona históricamente con* **coocj** dos.

ctam *s* hombre macho [man, male] **¿Itléno moahíi quih ctamya?** ¿Fue hombrecito tu primer hijo que se murió? [Was your first dead child a boy?] [*pl.:* **ctamcö**, **ctamjoj** (arc.)]

- **-ctamot** *vi* macho largo y estrecho [male, long and narrow]

ctam cazojéecoj *s* soltero de mayor edad [bachelor (older unmarried man)]

ctam cmaa caii *s* hombre joven [young man]

ctam cmaapa caii *s* adolescente [adolescent (male)]

ctam ihómac quiih *s* viudo [widower]

cyacj *vt* tener hermano o hermana [have sibling] **Cmaam zo hyonyácj.** No tengo hermana. [I don't have a sister.] [**ityácj**, **ityácalim**; **ityácalcam**; **oyácj** su hermano o hermana] *Véase también* **aamo oyácj** su primo, prima.

eec *s pos* hija (de él) [daughter] [**eecla** sus hijas (de él); **eecloj** sus hijas (de ellos); **heequet** hijas (de un hombre)]

haacat *s par abs* sobrino, sobrina (de un hombre) [niece, nephew (of man)] *Véase* **aac**.

haaquéect *s par abs* suegro, suegra (de un hombre) [father-in-law (of man); mother-in-law (of man)] *Véase* **aaquéect**.

hacáac *s par abs* nieto, nieta (hijo o hija de la hija de una mujer) [grandchild (woman's)] *Véase* **acáac**.

hacáasac *s par abs* nieto, nieta (hijo o hija del hijo de una mujer) [grandchild (woman's)] *Véase* **acáasac**.

hacacáma *s par abs* yerno (de uno o de una) [son-in-law] *Véase* **acacám**.

hacáitz *s par abs* cuñado (esposo de la hermana mayor de una mujer) [brother-in-law (woman's)] *Véase* **acáitz**.

hacámaz *s par abs* nuera (de uno) [daughter-in-law] *Véase* **acámaz**.

hacatazáta *s par abs* cuñada (esposa del hermano mayor de un hombre) [sister-in-law (man's older brother's wife)] *Véase* **acatazáta**.

hacmáhaj *s par abs* sobrino, sobrina (hijo o hija del hermano menor de uno) [nephew, niece (man's younger brother's child)] *Véase* **acmáhaj**.

hacmajéete *s par abs* cuñada (hermana mayor de la esposa de uno) [sister-in-law (wife's older sister)] *Véase* **acmajéete**.

hacméhej *s par abs* cuñado (hermano mayor del esposo de una) [brother-in-law (husband's older brother)] *Véase* **acméhej**.

hacoáacat *s par abs* cuñada (esposa del hermano de una mujer) [sister-in-law (woman's brother's wife)] *Véase* **acoáac**.

hacomíquet *s par abs* hijastro, hijastra (de uno o de una) [stepchild] *Véase* **acomíique**.

hacompáar *s pos abs* compadre (de uno) [coparent] *Véase* **icompáar**.

hacóome *s par abs* hermana menor (de uno) [younger sister (of man)] *Véase* **acóome**.

hactám cöcaii *s abs* cuñado (esposo de la hermana de un hombre) [brother-in-law (man's sister's husband)]

hahóocj *s der* gemelo [twin] **Ana quih hahóocj quih zo haaha.** Ana es gemela. [Ana is a twin.] **Arturo quih Alfredo quih ihax an ihomiha. Tiix iqui hahóocjiha.** Arturo y Alfredo son gemelos. [Arturo and Alfredo are twins.] [*pl.*: **hahóocalcam**] *De* **cahóocj** dar a luz gemelos.

haitoj *s* enano [midget]

halxcmáam *s par* concuña (esposa del hermano del esposo de una) [sister-in-law (husband's brother's wife)] *Véase* **alxcmáam**.

hamáacat *s par abs* hermano mayor (de una mujer) [older brother (of woman)] *Véase* **amáac**.

hamáhaj *s par abs* tío (hermano mayor del padre de uno) [uncle (father's older brother)] *Véase* **amáhaj**.

hamaquéte *s par abs* cuñada (hermana menor de la esposa de uno) [sister-in-law (wife's younger sister)] *Véase* **amaquéte**.

haméen *s 1* familia [family] *2* parte interior de la casa [interior of house] [*pl.*: **haméencoj**]

- **haméen tazo** *s* una familia (niños con el mismo padre y la misma madre) [a family (children with the same father and mother)]

hamíigo *s esp* amigo [friend] [pl: **hamíigoj**]

Hant Ihiyáx iic ctam, cmaam *s* uno de los gigantes mitológicos que vivió antes de los seris [giant that lived on the land before the Seris] (*Lit.*: el que viene de la orilla del mundo.)

hantáacat *s par abs* tía (hermana menor de la madre) [aunt (mother's younger sister)] *Véase* **antáac**.

hantx moca *s* antepasado (el que viene de la base) [ancestor (who comes from the base)] [*pl.*: **hantx mocat**]

hanyáacat *s par abs* hermano mayor (de uno) [brother (older)] *Véase* **anyáac**.

hapáacat *s par abs* hermana mayor (de uno) [sister (older)] *Véase* **apáac**.

hapáai *s* pápago [O'odham] Sinón.: **mopáai**.

hapáazi íi *s der* hijo primogénito [firstborn child] Sinón.: **cmique íi**. *Véase* **caazi**.

hapats *s* apache [Apache] Sinón.: **ziix haamxö quihit** (arc.)

hapéct *s par abs* abuela (madre de la madre) [grandmother (mother's mother)] *Véase* **act**.

hapée *s par abs* padre (de un hombre) [father] *Véase* **ai**.

hapéetz *s par abs* tío (hermano menor del padre) [uncle (father's older brother)] *Véase* **aitz**.

hapéez *s par abs* abuelo (padre de su madre) [grandfather (mother's father)] *Véase* **aaz**.

hapéme *s par abs* padre (de una mujer) [father (of woman)] *Véase* **am**.

hapémez *s par abs* abuela (madre del padre) [grandmother (father's mother)] *Véase* **amaz**.

hapén tazo *s* familia (hijos e hijas de un hombre, posiblemente de madres distintas) [family (children of a man, possibly with different mothers)] *Véase* **coon**.

hapépez *s par abs* abuelo (padre del padre) [grandfather (father's father)] *Véase* **apaz**.

hapépxez *s par abs* sobrino, sobrina (hijo o hija de la hermana mayor de una) [nephew, niece (child of one's older sister)] *Véase* **apxaz**.

hapéquez *s par abs* hermano menor (de una mujer) [brother (younger, of woman)] *Véase* **acaz**.

hapétcaz *s par abs* hermana menor (de una mujer) [sister (woman's younger)] *Véase* **atcz**.

hapéte *s par abs* madre (de uno o de una) [mother] *Véase* **ata**.

hapézcaz *s par abs* hermano menor (de uno) [brother (younger, of man)] *Véase* **azcz**.

haquéemot *s par abs* cuñado (hermano de la esposa de uno) [brother-in-law (wife's brother)] *Véase* **aquéemot**.

haquéequet *s par abs* cuñada (hermana del esposo) [sister-in-law (husband's sister)] *Véase* **aquéec**.

haquéetz *s par abs* cuñado (hermano menor del esposo) [brother-in-law (husband's younger brother)] *Véase* **aquéetz**.

haquémez *s par abs* suegra (de una) [mother-in-law (of woman)] *Véase* **aquémez**.

haquépez *s par abs* suegro (de una) [father-in-law (of woman)] *Véase* **aquépez**.

haquézi *s par abs* nieto, nieta (hijo o hija de la hija de uno) [grandchild (of man's daughter)] *Véase* **aquézi**.

haquíitaz *s par abs* sobrino, sobrina (hijo o hija del hermano mayor de uno) [nephew, niece (child of man's older brother)] *Véase* **aquíitaz**.

haquípaz *s par abs* nieto, nieta (hijo o hija del hijo de uno) [grandchild (man's son's child)] *Véase* **aquípaz**.

hasáacat *s par abs* hijo (de uno) [son (man's)] *Véase* **asáac**.

hast ano ctam, cmaam *s* uno de los antepasados que vivieron en la isla San Esteban, o sus descendientes [one of the Seri ancestors who lived on San Esteban Island, or a descendant] [*pl.:* **hast ano ctamcö, hast ano cmajíic**]

hatalxícom *s par abs* concuño (esposo de la hermana de la esposa) [brother-in-law (husband of wife's sister)] *Véase* **atalxícom**.

hatcmajéem *s par abs* cuñado (esposo de la hermana menor de una) [brother-in-law (husband of woman's younger sister)] *Véase* **atcmajéem**.

hatmáhaj *s par abs* tía (hermana mayor de la madre) [aunt (mother's older sister)] *Véase* **atmáhaj**.

hatquísa *s* grupo de seris que vivieron en la

isla Tiburón [Seris who lived on Tiburón Island]

haxáacat *s par abs* tío (hermano de la madre) [uncle (mother's brother)] *Véase* **axáac**.

haxíihat *s par abs* hermano mayor (de uno o de una), bisnieto [older brother] [great-grandchild] *Véase* **axíiha**.

hayáacat *s par abs* tía (hermana de su padre) [aunt] *Véase* **ayáac**.

hazáacat *s par abs* hermana mayor (de una mujer) [sister (older ~ of a woman)] *Véase* **azáac**.

hazmíi *s par abs* tío (hermano de la madre) [uncle (mother's brother)] *Véase* **azmíi**.

hazóocat *s par abs* sobrino, sobrina (hijo o hija del hermano de una) [nephew (of woman's brother)] [niece (of woman's brother)] *Véase* **azóoc**.

heequet *s par abs* hija (de un hombre) [daugher (of man)] [**eec** su hija (de él)]

heme cöquiin *vi* estar de novio [engaged] (*Lit.*: ir a casa.)

heno comcáac *s* los antepasados que vivieron en el centro de la isla Tiburón, o sus descendientes [Seri ancestors that lived in the center of Tiburón Island, or their descendants]

hezitim *s 1* rancho, ranchería [ranch] *2* ciudad, pueblo [city, town] *3* grupo de gente [group of people]

hoee *s* criatura recién nacida [baby (newborn)] [*pl.*: **hoeetaj**]

icompáar *s pos esp* compadre (de él o de ella) [his or her coparent] [*pl.*: **icompáaroj**; **hacompáar** compadre (de uno o de una)]

iha ocóa *s der pos* parientes [relatives] **Ziix iha quiya zo htcmaaho**. No sé quienes son sus parientes. [I don't know who his relatives are.] (*Lit.*: los que le pertenecen que conoce; *véase* **quiya** conocer.)

ihíin coom *vi irr* tener novia (acostarse cerca) [have fiancée] **Siip tiix quisíil cmaam tiquij ihíin coomiha**. Ese joven tiene a esa muchacha como novia. [That young man has that girl as his fiancée.] **Zaxt quisil ctam himcap quihíin coomiha. ¿Zo zaxt quisil cmaam ihíin coonya?** Ese muchacho tiene una prometida. ¿Quién es su prometida? [That boy has a fiancée. Who is his fiancée?]

ihíin iic coom *s* novia (prometida para casarse) [fiancée]

iiquet *s der pos* hijo, hija (de ella) [her child] [*pl.*: **iicto**, **iictoj**] *De* **quiiquet** encinta con. *Véase también* **ziix iiquet** perla.

- **iiquet íi** *s der pos* su primer hijo, hija [her first child]

iqui ipázi *s der* con el mismo padre [with the same father] [*pl.*: **iqui ipén**] *Véase* **caazi**.

iqui ipéquet *s der* con la misma madre [with the same mother] [*pl.*: **iqui ipécto**] *Véase* **quiiquet**.

iti miha *s pos* padre, madre (de él o de ella) [his or her father or mother] [*pl.*: **iti mihat**; **iti hmihat** mi padre o madre; **iti mica** padre o madre (de uno)]

itix heeque *s* hijo o hija de una persona que se ha casado más de una vez [child of a person who has been married more than once]

itóozj quih iháamlcam *s der pos* último hijo (de él o de ella) [his or her last child] *Véase* **caamolquim** pelear mano a mano.

iyat cöcoocp *vi* ser descendiente de [be descendant of] **He mos Lola hapáh quij iyat cöcoocp coi he zo haaha.** Yo también soy uno de los descendientes de Lola. [I am also one of the descendants of Lola.]

mericáana *s esp* norteamericano [American] [*pl.*: **mericáanaj**] Sinón.: **ziix xepe iti quiih**.

mopáai *s* pápago (arc.) [O'odham] Sinón.: **hapáai**.

nasyat *s* gigante (arc.) [giant (arch.)] [*pl.*: **nasyatoj**] Sinón.: **ziix coosyat**.

oen *s der pos* hijos e hijas (de él), familia [his children, his family] [sg: **yaazi**] *Véase* **coon**.

oyácj *s der pos* hermano, hermana (de él o de ella) [brother, sister (of him or her)] [*pl.:* **oyácalcam**] *De* **cyacj** tener hermano o hermana. *Véase también* **aamo oyácj** su primo o prima.

- **ziix oyácj** *s der pos* hermano difunto, hermana difunta [deceased brother, deceased sibling]

pailc haacöt *s* grupo de seris que vivieron en chozas hechas de madera flotante [group of Seris who lived in shelters made from driftwood]

patix coit *vi 1* estar solo [alone] *2* ser huérfano [orphan] **Patix imóitiha.** No es huérfano. [He isn't an orphan.] *Véase* **coit**.

pti iyat cöcoocp *s* genealogía [genealogy]

queaa *v der* tener como padre, llamarle padre (hombre) [have as father, call father (man)] **Ctam hoox quisoj ticop ziix quisíil ctam z iyáazitim taax; ¿tiix cmaax itéaa xah tamoz?** El hombre grande está llevando a un niño; ¿cree el niño que es su padre? [The large man is carrying a child. Does the child think that he is his father?] [**itéaa**, **itíita**; **itíita**] *De* **ai** su padre.

queac *v der* tener como sobrino o sobrina (hijo o hija de la hermana de un hombre) [have nephew or niece (son or daughter of man's sister)] [**itéac**, **itéacla**; **itéacloj**] *De* **aac** sobrino o sobrina.

queaz *v der* tener como abuelo (padre de su madre) [have as grandfather (father of mother)] [**itéaz**, **itéalc**; **itéalcoj**] *De* **aaz** abuelo.

quequez *v der* tener como hermano menor (mujer) [woman have as older sister (woman)] [**itéquez**, **itéquelc**; **itéquelcoj**] *De* **acaz** su hermano menor.

quequéect *v der* tener como suegro o suegra (hombre) [have as father-in-law or mother-in-law (man)] [**tequéect**; **tequéequelca**] *De* **aaquéect** su suegro, suegra.

quicáacat *v der* tener como nieto o nieta (hijo o hija de la hija de una mujer) [have as grandchild (child of woman's daughter)] [**ticáacat**, **ticáacla**; **ticáacloj**] *De* **acáac** su nieto, nieta.

quicáasac *v der* tener como nieto o nieta (hijo o hija del hijo de una mujer) [have as grandchild (child of woman's son)] [**ticáasac**; **ticáasajc**] *De* **acáasac** su nieto o nieta.

quicacáma *v der* tener como yerno [have as son-in-law] [**ticacáma**, **ticacámta**; **ticacámtolca**] *De* **acacám** su yerno.

quicáitz *v der* tener como cuñado (esposo de la hermana mayor de una mujer) [have as brother-in-law (husband of woman's older sister)] [**ticáitz**, **ticáitalca**; **ticáitalcoj**] *De* **acáitz** su cuñado.

quicámaz *v der* tener como nuera [have as daughter-in-law] [**ticámaz**, **ticámalc**; **ticámalcoj**] *De* **acámaz** su nuera.

quicatazáta *v der* tener como cuñada (esposa del hermano mayor de un hombre) [have as sister-in-law (wife of man's older sister)] [**ticatazáta**, **ticatazátoj**; **ticatazátoj**] *De* **acatazáta** su cuñada.

quicmáhaj *v der* tener como sobrino o sobrina (hijo o hija del hermano menor de un hombre) [have as nephew or niece (child of man's younger brother)] [**ticmáhaj**, **ticmáhalc**; **ticmáhalcoj**] *De* **acmáhaj** su sobrino o sobrina.

quicmajéete *v der 1* tener como cuñada (hermana mayor de su esposa) [have as sister-in-law (wife's older sister)] *2* tener como cuñada (esposa del hermano menor de un hombre) [have as sister-in-law (man's younger brother's wife)] [**ticmajéete**, **ticmajéetoj**; **ticmajéetoj**] *De* **acmajéete** su cuñada.

quicméhej *v der* tener como cuñado (hermano mayor de su esposo) [have as brother-in-law (husband's older brother)] [**ticméhej**, **ticméhelc**; **ticméhelcoj**] *De* **acméhej** su cuñado.

quicoáacat *v der* tener como cuñada (esposa del hermano de una mujer) [have as sister-in-law (woman's brother's wife)]

[**ticoáacat**, **ticoáacla**; **ticoáacloj**] *De* **acoáac** su cuñada.

quicomíiquet

- **quicomíiquet ctam**, **cmaam** *v der* ser el padrastro (madrastra) de [be stepfather or stepmother of] **Him quicojmíiquet ctamiha.** Es mi padrastro. [He is my stepfather.] **Mazi quicomíicto cmaamiha.** Es la madrastra de ustedes. [She is your stepmother.] [**ticomíique**, **ticomíicto**; **ticomíictoj**] *De* **acomíique** su hijastro.

quicóomet *v der* tener como hermana menor (hombre) [have as younger sister (man)] [**ticóomet**, **ticóomc**; **ticóomc**] *De* **acóome** su hermana menor.

quict *v der* tener como abuela (madre de su madre) [have as grandmother (mother of mother)] [**tict**, **ticatj**; **ticatj**] *De* **act** su abuela.

quictám cöcaii *v der* tener como cuñado (esposo de la hermana de un hombre) [have as brother-in-law (man's sister's husband)] [**tictám cöcaii**, **tictám cöqueej**; **tictam cöqueelcoj**] *De* **actám cöcaii** su cuñado.

quihs *vi* hijo primogénito (arc.) [firstborn child] [**tihs**; **tihsoj**] *Véase también* **hapáazi íi**, **cmique íi**, **iiquet íi**.

quiiquet *vt vd 1* encinta con, embarazada con, ser madre de [pregnant with] [(be mother of)] *2* hacer muñeca (en voz pasiva) [(make doll) (in passive)] **Xpanáams quih yopéquet.** Se hacían muñecas del trigo de mar. [Dolls were made from eelgrass.] *3* tener muñeca [have doll] **Hapéquet quih hyíiquet.** Tuve una muñeca. [I had a doll.] [*Trans.*: **itíiquet**, **itíicto**; **itíictoj**, **itíictolca**; *Detrans.*: **tiiquet**, etc.] *Véase también* **an ihíicto** su útero; **hapéquet** muñeca; **iiquet** su hijo, hija; **ziix iiquet** perla.

- **coméx quiiquet** *vt* tener niño ilegítimo [have illegitimate child] *Véase también* **coméx hapéquet** niño ilegítimo.
- **him quiiquet** *s* mi madre [my mother]
- **quiicto quixi** *vt* estar en la menopausia [be in menopause]

quiita *v der* tener como padre (plural) [have as father (plural)] *Véase* **queaa**.

quiitalca *v der* tener como tíos [have as uncles] *Véase* **quiitz**.

quiitz *v der* tener como tío (hermano menor de su padre) [have as uncle (father's younger brother)] [**tiitz**, **tiitalca**; **tiitalcoj**] *De* **aitz** su tío.

quilxcmáam *v der* tener como concuña (esposa del hermano de su esposo) [have as sister-in-law (husband's brother's wife)] [**tilxcmáam**, **tilxcmajíic**; **tilxcmajíic**] *De* **alxcmáam** su concuña.

quimalcoj *v der* tener como abuela (plural) [have as grandmother (plural)] *Véase* **quimaz**.

quimaquéte *v der* tener como cuñada (hermana menor de su esposa) [have as sister-in-law (wife's younger sister)] [**timaquéte**, **timaquétoj**; **timaquétoj**] *De* **amaquéte** su cuñada.

quima *v der* tener como padre (mujer) [have as father (woman)] **Himímaha.** No es mi padre. [**tima**] *De* **am** su padre.

quimáacat *v der* tener como hermano mayor (mujer) [have as older brother (woman)] [**timáacat**, **timáaclam**; **timáacloj**] *De* **amáac** hermano mayor.

quimaz *v der* tener como abuela (madre de su padre) [have as grandmother (father's mother)] [**timaz**, **timalc**; **timalcoj**] *De* **amaz** su abuela.

quimáhaj *v der* tener como tío (hermano mayor de su padre) [have as uncle (father's older brother)] [**timáhaj**, **timáhalc**; **timáhalcoj**] *De* **amáhaj** su tío.

quintáacat *v der* tener como tía (hermana menor de su madre) [have as aunt (mother's younger sister)] [**tintáacat**, **tintáacla**; **tintáacla**] *De* **antáac** su tía.

quinyáacat *v der* tener como hermano mayor (hombre) [have as older brother (man)]

[**tinyáac, tinyáacla; tinyáacla**] *De* **anyáac** su hermano mayor.

quipáacat *v der* tener como hermana mayor (hombre) [have as older sister (man)] [**tipáacat, tipáacla; tipáacla**] *De* **apáac** su hermana mayor.

quipaz *v der* tener como abuelo (padre de su padre) [have as grandfather (father's father)] [**tipaz, tipalc; tipalcoj**] *De* **apaz** su abuelo.

quipxaz *v der* tener como sobrino o sobrina (hijo o hija de la hermana mayor de una mujer) [have as nephew or niece (son or daughter of woman's older sister)] [**tipxaz, tipxalc; tipxalcoj**] *De* **apxaz** su sobrino o sobrina.

quiquéemot *v der* tener como cuñado (hermano de su esposa) [have as brother-in-law (wife's sister)] [**tiquéemot, tiquéemolca; tiquéemolcoj**] *De* **aquéemot** su cuñado.

quiquéequet *v der* tener como cuñada (hermana de su esposo) [have as sister-in-law (husband's sister)] [**tiquéequet, tiquéecla; tiquéecloj**] *De* **aquéec** su cuñada.

quiquéetz *v der* tener como cuñado (hermano menor del esposo) [have as brother-in-law (husband's younger brother)] [**tiquéetz, tiquéetalca; tiquéetalca**] *De* **aquéetz** su cuñado.

quiquémez *v der* tener como suegra (mujer) [have as mother-in-law (woman)] [**tiquémez, tiquémelc; tiquémelcoj**] *De* **aquémez** su suegra.

quiquépez *v der* tener como suegro (mujer) [have as father-in-law (woman)] [**tiquépez, tiquépelc; tiquépelcoj**] *De* **aquépez** su suegro.

quiquézi *v der* tener como nieto o nieta (hijo o hija de la hija de un hombre) [have as grandchild (man's daughter's child)] [**tiquézi, tiquézilc; tiquézilcoj**] *De* **aquézi** su nieto o nieta.

quiquíitaz *v der* tener como sobrino o sobrina (hijo o hija del hermano mayor de un hombre) [have as nephew or niece (man's older brother's child)] [**tiquíitaz, tiquíitalc; tiquíitalcoj**] *De* **aquíitaz** su sobrino o sobrina.

quiquípaz *v der* tener como nieto o nieta (hijo o hija del hijo de un hombre) [have as grandchild (man's son's child)] [**tiquípaz, tiquípalc; tiquípalcoj**] *De* **aquípaz** su nieto o nieta.

quisáacat *v der* tener como hijo (hombre) [have as son (man)] [**tisáacat, tisáacla; tisáacloj**] *De* **asáac** su hijo.

quita *v der* tener como madre [have as mother] **Himítaha.** Ella no es mi madre. [She is not my mother.] [**tita; titoj**] *De* **ata** su madre.

quitalxícom *v der* tener como concuño (esposo de la hermana de la esposa) [have as brother-in-law (wife's sister's husband)] [**titalxícom, titalxícomjc; titalxícomjoj**] *De* **atalxícom** su concuño.

quitcamáhaj *v der* tener como sobrino o sobrina (hijo o hija de la hermana menor de una mujer) [have as nephew or niece (woman's younger sister's child)] [**titcamáhaj, titcamáhalc; titcamáhalcoj (titcamáhzil)**] *De* **atcamáhaj** su sobrino o sobrina.

quitcaz *v der* tener como hermana menor (mujer) [have as younger sister (woman)] [**titcaz, titcal; titcalcoj**] *De* **atcz** su hermana menor.

quitcmajéem *v der* tener como cuñado (esposo de la hermana menor de una mujer) [have as brother-in-law (woman's younger sister's husband)] [**titcmajéem, titcmajéemtaj; titcmajéemtolca**] *De* **atcmajéem** su cuñado.

quitmáhaj *v der* tener como tía (hermana mayor de su madre) [have as aunt (mother's older sister)] [**titmáhaj, titmáhalc; titmáhalcoj**] *De* **atmáhaj** su tía.

quitoj *v der* tener como madre (plural) [have

as mother (plural)] *Véase* **quita**.

quixáacat *v der* tener como tío (hermano de su madre) [have as uncle (mother's brother)] [**tixáacat**, **tixáacla**; **tixáacla**] *De* **axáac** su tío.

quixíihat *v der* tener como hermano mayor [have as older brother] **Quixíihat quih hax an iyáahit**. Cuando una persona tiene un hermano mayor, le lava la ropa. [When a person has an older brother, one washes his clothes.] [**tixíihat**, **tixíihla**; **tixíihla**] *De* **axíiha** su hermano mayor.

quiyáacat *v der* tener como tía (hermana de su padre) [have as aunt (father's sister)] [**tiyáacat**, **tiyáacla**; **tiyáacloj**] *De* **ayáac** su tía.

quizáacat *v der* tener como hermana mayor (mujer) [have as sister (woman)] [**tizáacat**, **tizáacla**; **tizáacla**] *De* **azáac** su hermana mayor.

quizcaz *v der* tener como hermano menor (hombre) [have as younger brother (man)] [**tizcaz**, **tizcal**; **tizcaloj**] *De* **azcz** su hermano menor.

quizmíit *v der* tener como tío (hermano de su madre) [have as uncle (mother's brother)] [**tizmíit**, **tizmíiyat**; **tizmíiyat**] *De* **azmíi** su tío.

quizóocat *v der* tener como sobrino o sobrina (hijo o hija del hermano de una mujer) [have as nephew or niece (woman's brother's child)] [**tizóocat**, **tizóocla**; **tizóocla**] *De* **azóoc** sobrino o sobrina.

siip *s* hombre joven [boy, young man] [*pl.:* siipiic]

- **-siipit** *v der* ser un joven, crecer [be a young man, grow up, mature]

Tahéöjc comcáac *s pl* seris de la isla Tiburón [Seris from Tiburón Island]

xica comcáac cmis *s pl* indígenas que no son seris [Indians that are not Seris] (*Lit.:* los que se parecen a los seris.)

xica hast ano coii *s pl* antepasados que vivieron en la isla San Esteban [the Seri ancestors that lived on San Esteban Island]

xica iyat cöiyácapoj *s pos der* antepasados [ancestors] *De* **coocp** crecer.

xica quih quiistox *s pl* gente [people] *Véase* **ziix quiisax**.

xica quihíin cayáxi *s* parientes [relatives] *Véase* **ihíin**.

xica quiistox pti iqui haméen tazo *s pl* familia [family]

xica xnai iicp coii *s pl* tastioteños, antepasados que vivieron cerca de Tastiota [Tastioteños, the Seri ancestors that lived near Tastiota]

xnaa motat *s pl* los antepasados seris que vivieron cerca de Tastiota y Guaymas [Seri ancestors that lived near Tastiota and Guaymas]

xoxáacöl *s* grupo de seris del grupo **Tahéöjc comcáac** [group of seris within the group **Tahéöjc comcáac**]

yaapos *s pos* hijo hija (arc.) [son, daughter, child (arch.)] Sinón.: **yaazi**, **iiquet**. [*pl.:* **yaapos**]

yaazi *s der pos* hijo o hija (de él) [his child] [*pl.:* **oen**] *De* **coon** llevar.

yequim *s* yaqui [Yaqui] [*pl.:* **yectz**; *se relaciona con la palabra yaqui* híakim *(yaquis).*]

zacáam *s* muchacha, mujer no casada [girl, unmarried young woman] [*pl.:* **zacáamalc**]

- **-zacáamat** *v der* ser una joven [be a young woman]

zaxt quisil ctam, **cmaam** *s* niño, niña [boy, girl, child] **Zaxt quisil quih tootöjc quij iscommáctimaha.** Un niño no debe tocar la fruta de la cholla. [A child should not touch a cholla cactus fruit.] [*pl.:* **xica quizúl**] Sinón.: **ziix quisúl**

zaxt quisúl *s* bebé [baby] [*pl.:* **xica quisúl**] *Véase* **quisil**.

- **zaxt quisúl hapx hant coit** *s* feto (después de salir) [fetus (after leaving womb)]

- **zaxt quisíil hasxéen oo coom** *s* feto (antes de salir) [fetus (before leaving womb)]

zcaxt *s* joven (arc.) [boy (arch.)] [*pl.:* **zcaxatj**] Sinón.: **zaxt quisil**.

ziix atinyác *s pos* hermano o hermana difunta (de un hombre) [deceased sibling (of man)]

ziix atoyácj *s pos* hermano o hermana difunta (de una mujer) [deceased sibling (of woman)]

ziix caixaj *s* difunto (persona mayor que uno) [deceased person (older than one)] **Ziix caixaj hoyácj quih icóos hantx moca anxö ixóa.** Mi hermano, el difunto, sabía muchas canciones de los antepasados. [My deceased brother knew many songs of the ancestors.]

ziix cmotómn *s* persona difunta (menor que uno) o todavía no nacida [deceased person (younger than one) or one not yet born] (*Lit.*: cosa débil.)

ziix cmotómn icot quiih hipquih *s pos* yerno difunto [deceased son-in-law]

ziix cmotómn quipnáil icot quiih hipquih *s pos* nuera difunta [deceased daughter-in-law]

ziix coopoquim *s* yaqui (arc.) [Yaqui (arch.)] (*Lit.*: cosa que pone pinole en la boca.) Sinón.: **yequim**. [*pl.:* **xica coopocam**]

ziix cöima *s der* muchacha de la fiesta de pubertad [girl for whom the puberty fiesta is held] [*pl.:* **ziix cöimj**] *De* **coha** experimentar.

ziix haamxö quihit *s* apache (arc.) [Apache (arch.)] Sinón.: **hapats**

ziix heme icot cöcomsisíin *s* huérfano [orphan] [*pl.:* **xica heme icot cöcomsisíijc**]

ziix ihax iicx ihíih *s pos* esposo difunto, esposa difunta [deceased spouse]

ziix ipnáil cacöla *s* gitano [gypsy] [*pl.:* **xica ipnáaaj cacöla**] (*Lit.*: persona con falda larga.)

ziix ipnáil cmoosa *s* gitano [gypsy] [*pl.:* **xica ipnáaaj cmoosa**] (*Lit.*: persona con falda plegada.)

ziix iti coomam *s* bebé nacido muerto (arc.) [baby (stillborn)]

ziix iti miha ctam, cmaam *s pos* padre difunto, madre difunta [deceased parent] [**ziix iti hmiha** mi padre difunto]

- **ziix iti miha mos toii ziix iti miha** *s pos* tatarabuelo [great-great-grandparent]

ziix itlén oah *s der pos* hijo difunto, hija difunta [deceased child] *De* **quih** poner.

ziix quiisax *s* cosa que vive, animal, persona [living thing, animal, [person] [*pl.:* **xica quiistox**]

- **hax ziix quiisax zo haquix piihx** *exp* quienquiera [whoever]

ziix quipnáil *s* mujer [woman] (*Lit.*: cosa con falda.) [*pl.:* **xica quipnáaaj**] Sinón.: **cmaam**.

ziix quisíil *s* niño [child] [*pl.:* **xica quizíil**]

- **ziix quisíil ctam** *s* niño, muchacho [boy]
- **ziix quisíil cmaam** *s* niña, muchacha [girl]

ziix xepe iti quiih *s* norteamericano [American] (*Lit.*: cosa que está en el mar.) [*pl.:* **xica xepe iti coii**] *Sinón.:* **mericáana**.

ziix yacái *s der pos* esposo fallecido, esposa fallecida [deceased spouse] [*pl.:* **xica yacáaaxoj**] (*Lit.*: persona que siguió; *de* **cöcocái**.)

ziix yacáii *s der pos* abuelo fallecido, abuela fallecida [deceased grandparent] [*pl.:* **xica yaquéej**] *De* **cacáii** criar.

An OT Account of Laryngealization in Cuzco Quechua*

Steve Parker

Classical phonemic accounts of Cuzco Quechua posit three distinct series of stops: plain, aspirated, and glottalized. Parker and Weber 1996 argue instead for a root-level feature of laryngealization governed by a small number of formal mechanisms. In this paper, the analysis is taken one step farther and it is shown that even greater explanatory power may be achieved by appealing to the model of Optimality Theory.

1. Introduction

The purpose of this paper is to present an account of glottalized and aspirated stops in Cuzco Quechua, spoken in Peru, within the framework of Optimality Theory (Prince and Smolensky 1993). The groundwork for this study was laid by Parker and Weber (1996), who basically described the facts and proposed an analysis of them in terms of autosegmental theory and Grounded Phonology (Archangeli and Pulleyblank 1994). I will first review the distribution of glottalized and aspirated segments (which I will henceforth group together under the common label 'laryngealized', as in Parker and Weber 1996). Having done so, I will then show how the same facts can be accounted for in terms of violable constraint ranking and interaction, the central premise of Optimality Theory.

2. Overview of Quechua phonology

Cuzco Quechua exhibits the standard five vowel inventory, /i e a o u/. Primary stress normally falls on the penultimate syllable of each word. If we ignore some minor complications, virtually all Quechua words can be exhaustively parsed with the maximal syllable template [CVC]. Consequently, word-medial consonant clusters are always heterosyllabic: /pis.qa/ *five*. At the underlying level, vowel-initial syllables occur only word-initially, whereas all word-internal syllables must contain an onset. However, at the phonetic level *all* syllables must obey this Obligatory Onset Condition (Itô 1986). Quechua satisfies this constraint by epenthesizing a default word-initial [ʔ], just as many other languages do.

3. Distribution of laryngealized stops

In Cuzco Quechua, the voiceless stops (and affricate) /p t č k q/ may all be contrastively glottalized or aspirated. (/q/ is post-velar or uvular.) Thus, it is possible to find minimal pairs and triplets such as the following:

(1) [tanta] *collection, combination*
[tʔanta] *bread*
[tʰanta] *old, used up, worn out*

Because of contrastive examples such as these, classical phonemic accounts in the structuralist tradition posited the following twenty-six individual consonant phonemes for this language, including three distinct series of stops (Rowe 1950, Cusihuamán 1976:291):

*Thanks to Diamandis Gafos for insightful suggestions on an earlier version of this paper.

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41
Online. URL: http://www.und.nodak.edu/dept/linguistics/wp/1997Parker.pdf
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(2)

$p^{?}$	$t^{?}$	$č^{?}$	$k^{?}$	$q^{?}$	
p^{h}	t^{h}	$č^{h}$	k^{h}	q^{h}	
p	t	č	k	q	
	s	š			h
m	n	ñ			
	l	ʎ			
	r				
w		y			

However, as Parker and Weber (1996) note, many previous authors have observed that the laryngealized stops are subject to extreme phonotactic restrictions. Thus, while the plain consonants listed in (2) may occur in onsets or codas, in roots or in suffixes, and more than once in the same root, laryngeal stops are limited by the following constraints:

(a) They occur only in roots, never in suffixes.

(b) They occur only in the onset position of the syllable, never in codas.

(c) When laryngealized consonants do occur, they are always the first syllable-initial stop of the root (or word, since there are no prefixes). Thus, forms such as the hypothetical *[poq$^{?}$a], in which the second stop is glottalized (rather than the first one), are systematically non-attested.

(d) They may occur only once per root. No Quechua root contains two aspirated stops or two glottalized stops. Furthermore, glottalization and aspiration are mutually exclusive in the sense that they never co-occur in the same root. Thus a word may have an aspirated stop or a glottalized one, but not both. The generalization is that laryngealization is restricted to one occurrence per root.

(e) Aspirated consonants and /h/ are mutually exclusive with respect to roots. That is, if a root contains an aspirated stop, it may not contain an /h/, and vice versa.

(f) Words containing glottalized stops always begin with a consonant. Whenever an ejective occurs in a reflex of a Proto-Quechua root that began with a vowel, in Cuzco Quechua the word begins instead with [h]. For example, the Proto-Quechua form for *How many?* is *ayka, while in Cuzco it is [hayk$^{?}$a].

Concerning these last two points, (e) and (f), I wish to clarify that /h/ is indeed a contrastive phoneme in Cuzco Quechua, despite its epenthetic nature in forms such as [hayk$^{?}$a]. Thus, not all words that begin with an [h] contain a glottalized stop later in the root; for example, /hatun/ *big, tall.*

The following data illustrate the distributional patterns of laryngealized stops described in this section:

(3)

$p^{?}$atay	*to bite*
p^{h}atay	*to explode, blow up*
$t^{?}$anta	*bread*
t^{h}anta	*old, used up, worn out*
$č^{?}$aču	*treacherous, tricky*
$č^{h}$aču	*ragged, tattered*
$k^{?}$anka	*rooster*
k^{h}anka	*slimy, clammy*
$q^{?}$ata	*turbid, muddy*

q^{h}ata	*mountainside*
hap$^{?}$iy	*to light (a fire), grab, hold*
wirp$^{?}$a	*lip*
sup^{h}u	*body hair*
musp^{h}apakuy	*to be delirious*
ʎat$^{?}$ay	*to unplug, uncork*
hunt$^{?}$a	*full, complete*
rakt$^{?}$a	*thick*
it^{h}a	*species of small insect*
mič$^{?}$u	*mixed, jumbled*
moqč$^{?}$ikuy	*to wash or rinse out the mouth*
sunč$^{?}$u	*yellow aster*
ač^{h}uy	*to postpone, delay*
anč^{h}ayna	*thus, so*
hak$^{?}$u	*floury*
rank$^{?}$ukuy	*to get twisted up*
ak^{h}akaw	*How hot it is!*
musk^{h}iy	*to smell*
naq$^{?}$o	*dented, bruised*
hanq$^{?}$as	*species of lupine plant*
leq^{h}e	*rotten, putrid*
ranq^{h}a	*forgetful*
warak$^{?}$a	*sling made of wool*
hamawt$^{?}$a	*learned, wise*

The obvious conclusion to draw from these facts is that laryngealization in Cuzco Quechua is not a characteristic of individual phonemes, but rather of entire roots. Thus, Parker and Weber (1996) account for these facts in a principles and parameters model by positing the features [constricted glottis] (CG) and [spread glottis] (SG) as floating root-level autosegments which dock by rule to the leftmost syllable-initial stop in the word. This allows us to drastically simplify the phonemic inventory in (2) by eliminating the two series of laryngealized obstruents. Furthermore, as Parker and Weber (1996) point out, the distributional quirks of laryngealized roots with respect to the phoneme /h/ can also be explained as an effect governed by the Obligatory Contour Principle (OCP), as we shall see in the following sections.

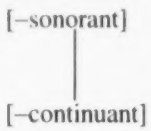
4. OT analysis

In this section I will recast the Parker and Weber (1996) analysis in terms of Optimality Theory. Much of the basic groundwork has been laid already by McCarthy (1996). I will draw from his account here and then modify and expand it in order to handle all of the interactions of laryngeal features in Cuzco Quechua.

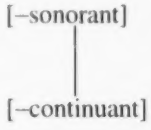
4.1. Licensing [constricted glottis] and [spread glottis]

In the first place, we must obviously account for the fact that the features [constricted glottis] and [spread glottis] surface only on stops and in isolation. This can be accomplished by stipulating the structural conditions for these features as follows:

(4) LicenseCG (LICCG)
The feature [cg] is licensed only in isolation or in conjunction with the following configuration:



(5) LicenseSG (LICSG)
The feature [sg] is licensed only in isolation or in conjunction with the following configuration:



The addition of "in isolation" to the licensing constraints for [sg] and [cg] is needed in order to allow a phonemic /h/ to surface, and not just aspirated stops. Likewise, the default epenthetic onset [ʔ] needs to be permitted to surface independently of ejectives. As McCarthy 1996 shows, these two constraints must dominate the corresponding MAX constraints in order to filter out hypothetical underlying forms containing laryngealized sonorants (cf. the "richness of the base" principle of OT):

(6)

UR: /mˀaru/	LICCG	MAXCG
a. ☞ [maru]		*
b. [mˀaru]	*!	

The tableau above establishes the ranking of LICCG over MAXCG. Thus the hypothetical underlying glottalization on a sonorant will never surface since high-ranking LICCG compels deletion of this feature in violation of the lower-ranked faithfulness constraint. Comparable arguments could be given for the interaction of aspiration features (LICSG ⟩⟩ MAXSG) as well. For the sake of brevity I will not duplicate all of these details in the ensuing discussion, but will instead use ejectives as examples of how we could deal with aspirates in an analogous way. Therefore, constraints which refer to the feature [constricted glottis] should also be understood as referring to the feature [spread glottis].

4.2. Alignment constraint

In order to account for the fact that laryngealization is always attracted to the leftmost stop in a word, McCarthy 1996 posits an alignment constraint which we can express as follows:

(7) ALIGNCG
Align the feature [cg] with the left edge of a prosodic word.
Align(CG,L,PrWd,L).

The interaction of this markedness constraint with the others already discussed is illustrated in the following tableau as applied to the word /ñukˀu/ *withered*:

(8)

UR: /ñuk$^{?}$u/	LICCG	MAXCG	ALIGNCG
a. ☞ ñuk$^{?}$u			**
b. ñ$^{?}$uku	*!		
c. ñuku		*!	

Candidate (b) [ñ$^{?}$uku] attempts to satisfy ALIGNCG by shifting the glottalization to the word-initial /ñ/. However, this incurs a fatal violation of LICCG, as we have already seen. Candidate (c), however, resorts to a different strategy in order to resolve the misalignment: it deletes the laryngealization altogether. This violates MAXCG, so [ñuku] is also a non-optimal output for this underlying form. The fact that the completely faithful candidate (a) [ñuk$^{?}$u] is the one which correctly surfaces is an indication that ALIGNCG is ranked below MAXCG, as I have shown in this tableau. Thus, perfect alignment can be sacrificed in order not to violate higher ranked constraints, specifically LICCG and MAXCG. As McCarthy points out, while the ALIGNCG constraint dictates that glottalization will show up as far left in the word as possible (all other things being equal), this does not mean that laryngealization will necessarily fall on the word-initial segment in all cases. On the contrary, as we have seen, if the leftmost potential anchor is not a stop or affricate, high ranking LICCG will block glottalization from surfacing on that segment.

It is crucial in this case to count violations of ALIGNCG in a gradient rather than a categorical fashion, since otherwise we could not select between candidates in which glottalization surfaces on the second rather than the third syllable of the root. For example, given a hypothetical underlying form such as /rankuk$^{?}$uy/ (cf. [rank$^{?}$ukuy] *to get twisted up*), Cuzco Quechua requires that the leftmost stop be the one which surfaces laryngealized. This is accomplished in the following tableau since candidate (a) [rank$^{?}$ukuy] receives three marks under ALIGNCG for the segments /ran/ which separate the ejective from the beginning of the word. However, totally faithful candidate (b), [rankuk$^{?}$uy], violates alignment five times and thus fails to survive:

(9)

UR: /rankuk$^{?}$uy/	LICCG	MAXCG	ALIGNCG
a. ☞ rank$^{?}$ukuy			***
b. rankuk$^{?}$uy			****!*

4.3. A constraint inhibiting the shifting of laryngealization

Another constraint which McCarthy also considers is STAYCG. This constraint inhibits the shifting of laryngealization from its underlying locus to some other segment in the word. As the following tableau demonstrates, STAYCG must be ranked below ALIGNCG, since the latter needs to compel a violation of the former in the case of hypothetical underlying forms such as /pat$^{?}$ay/ (cf. [p$^{?}$atay] *to bite*):

(10)

UR: /pat$^{?}$ay/	ALIGNCG	STAYCG
a. ☞ p$^{?}$atay		*
b. pat$^{?}$ay	*!*	

Here the correct surface form [p$^{?}$atay] violates STAYCG in order to perfectly satisfy ALIGNCG, and so is the most harmonic candidate. The loser [pat$^{?}$ay] maintains the glottalization on its underlying anchor, but in doing so fatally violates alignment. (In this case the higher ranking

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constraints LICCG and MAXCG are perfectly satisfied by both candidates and so are irrelevant in choosing between the two.)

4.4. Coda filter

As I indicated in §3, another crucial restriction on the distribution of laryngealized stops in Cuzco Quechua is that they systematically never occur in syllable-final position. I would explain this typical example of coda neutralization by pointing out that aspirates and ejectives both involve a high intensity, fortis airstream in their articulation, whereas syllable-final position corresponds to a tapering out of the airstream after the nuclear pulse. We can thus incorporate this insight into our formal analysis by borrowing a constraint posited independently by Lombardi (1995):

(11) AlignLaryngeal (ALIGNLAR)
Align a Laryngeal Node with the left edge of a syllable.
Align(Laryngeal, L, σ, L).

This constraint requires any segment bearing a Laryngeal Node to occur in syllable-initial position. This formalization is crucially based on the assumption that all segments besides ejectives, aspirates, and /h/ are underspecified for laryngeal features, including [±voice], since these are otherwise not contrastive in the language (obstruents are uniformly voiceless while sonorants are voiced). Since phonemic /h/ does not occur syllable-finally in Cuzco Quechua either, the ALIGNLAR filter (11) captures the relevant generalization. This constraint is undominated in this language since no other pressure, even MaxCG, can compel it to be violated. Thus, consider a hypothetical underlying form such as /rak$^{?}$ta/ (cf. [rakt$^{?}$a] *thick*):

(12)

UR: /rak$^{?}$ta/	ALIGNLAR	LICCG	MAXCG	ALIGNCG	STAYCG
a. ☞ rakt$^{?}$a				***	*
b. rak$^{?}$ta	*!			**	
c. r$^{?}$akta		*!			*
d. rakta			*!		*

As demonstrated by tableau (12) above, regardless of where laryngealization is located in a root underlyingly, the postulated constraint ranking will ensure that it correctly surface on the leftmost *syllable-initial* stop, as we desire. Thus, the winning candidate [rakt$^{?}$a] violates only low ranking ALIGNCG and STAYCG, whereas the perfectly faithful candidate (b), [rak$^{?}$ta], fatally violates the undominated ALIGNLAR filter. Candidates (c) and (d) avoid misalignment but in doing so they fall victims to other higher ranked constraints.

4.5. Root faithfulness

The final detail which McCarthy discusses is the fact that laryngealization in Cuzco Quechua is restricted to roots and thus never occurs in suffixes. (Quechua languages have no prefixes.) He accounts for this common dichotomy by positing a markedness constraint, *CG, which prohibits glottalized segments. This constraint dominates MAXCG, but at the same time is dominated by MAXROOTCG (preserve a CG specification if it occurs in a root). The following tableau illustrates this analysis for the words [t$^{?}$anta] *bread* and [tanta-kuna] *collections*:

(13)

UR: /t$^{?}$anta/	MAXROOTCG	*CG	MAXCG
a. ☞ t$^{?}$anta		*	
b. tanta	*!		*
UR: /tanta-k$^{?}$una/			
a. ☞ tanta-kuna			*
b. tanta-k$^{?}$una		*!	

In the word [t$^{?}$anta] above, the totally faithful candidate (a) wins since its root-initial ejective is maintained. This violates *CG, but the alternative is to delete this feature and thus fatally lose on the higher ranked MAXROOTCG, (candidate (b)). The opposite situation obtains with a hypothetical underlying form such as /tanta-k$^{?}$una/, where [-kuna] is a pluralizing suffix. Here the glottalization on the /k$^{?}$/ is no longer "protected" by MAXROOTCG since it is in an affix. Consequently, *CG kills the totally faithful candidate (b), whereas the winning [tanta-kuna] only violates low ranked MAXCG. In order to be technically correct, I could have included MAXROOTCG and *CG in my earlier tableaux. However, since the same outcomes would result regardless of this fact, I will continue to leave them out for the sake of simplicity.

4.6. Obligatory onset

I now consider the fact that all syllables in Cuzco Quechua obey the Obligatory Onset Condition. Recall that forms which begin with a vowel underlyingly receive a default word-initial [?] in order to satisfy this requirement. In situations like this the [?] is normally considered only a transitional phonetic reflex which plays no active role in the phonology of the language. As we shall observe shortly, however, there is evidence that these [?]'s in Cuzco Quechua are crucially sensitive to certain important constraints.

The presence of epenthetic [?] can be enforced by assuming that ONSET is high ranked, such that it compels violation of DEP (Dependency). ONSET here is the well-known prohibition against vowel-initial syllables, and DEP inhibits the presence of features and/or segments in the output which were not present in the input (i.e., it inhibits epenthesis). The specification of [?] as the default consonant can be achieved by the familiar strategy of ranking *PHARYNGEAL below the prohibition against all other place nodes:[1]

(14) *Labial,*Dorsal ⟩⟩ *Coronal ⟩⟩ *Pharyngeal

The ranking of *LABIAL and *DORSAL above *CORONAL is posited, based on universal patterns of markedness without any specific empirical evidence in Cuzco Quechua. In the markedness hierarchy (14) above, the default epenthetic consonant of choice will be a pharyngeal. However, this leaves open the question of how to enforce the selection of [?] over [h]. Perhaps the simplest solution would be to split *PHARYNGEAL into two more specific constraints, *SG and *CG. However, as Diamandis Gafos (p.c.) has pointed out to me, this ranking is highly stipulatory and does not follow from any independently motivated facts. A better solution would be to rely on Clements' (1990) proposal for a Sonority Dispersion Principle (SDP). Basically this constraint requires that we maximize the sonority slope from onset to nucleus and minimize it from nucleus to coda. Since [?] (a stop) is lower in sonority than [h] (a fricative), the Sonority Dispersion Principle

[1] Here I am using the cover term 'pharyngeal' to include glottal consonants as well, in keeping with a growing body of recent literature. For example, see Prince and Smolensky 1993 and Kenstowicz 1994 (pp. 456-457, citing McCarthy 1991).

will choose [ʔ] over [h] as a preferred onset when all other factors lead to a tie. Below I illustrate the interaction of these constraints for the word [ʔasikuy] *to laugh*:

(15)

UR: /asikuy/	ONSET	DEP	*LAB,*DOR	*COR	*PHAR	SDP
a. ☞ ʔasikuy		*	**	*	*	
b. asikuy	*!		**	*		
c. tasikuy		*	**	**!		
d. hasikuy		*	**	*	*	*!

In the tableau above, the winning candidate [ʔasikuy] violates DEP due to the insertion of a word-initial [ʔ]. This is tolerated, however, since it satisfies top-ranked ONSET, whereas totally faithful [asikuy] fails in this respect. All of the candidates share in common two violations of *DOR (one for the /k/ and one for the /y/) and one of *COR (for the /s/). In addition, [tasikuy] entails a second and fatal violation of *COR whereas [hasikuy] and [ʔasikuy] equally violate the low-ranked *PHAR. However, since [ʔasikuy] begins with a (voiceless) stop, its initial onset-nucleus sonority slope is perfectly maximized, whereas the initial fricative in [hasikuy] fatally violates the Sonority Dispersion Principle. Thus, [ʔasikuy] emerges as the correct winning candidate.

4.7. An OCP effect

We now come to the interesting stipulation that no root in Cuzco Quechua may contain two ejectives, two aspirates, or an aspirated stop plus an /h/. As Parker and Weber (1996) argue, these examples of root co-occurrence limitations are prototypical OCP effects. Thus, we can account for these phenomena by positing that in this language the OCP constraint dominates MAXCG and MAXSG (or, more precisely, MAXROOTCG and MAXROOTSG) because it requires unfaithful deletion in those cases in which Gen supplies an input containing two identical laryngeal specifications. Consider as an example the hypothetical underlying representation /qʔatʔa/ (cf. [qʔata] *muddy*):

(16)

UR: /qʔatʔa/	OCP	MAXCG	ALIGNCG
a. ☞ qʔata		*	
b. qʔatʔa	*!		**
c. qatʔa		*	*!*
d. qata		**!	

The winning candidate [qʔata] obeys the OCP by deleting the glottalization on the second stop and thus only violates MAXCG. Candidate (b), on the other hand, faithfully preserves both underlying ejectives but in doing so fatally violates top-ranked OCP. Candidate (c) is similar to (a) in that it maintains only one occurrence of [cg]; but (c) violates ALIGNCG since it preserves glottalization on a non-initial stop. Finally, candidate (d) is not optimal because its double deletion of the underlying glottalization violates MAXCG twice.

In the following tableau I give a further example illustrating the interaction of these constraints with the feature [sg] for the hypothetical underlying form /huqʰari/ (cf. [huqari] *to lift*):

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(17)

UR: /huq^{h}ari/	OCP	MAXSG	ALIGNSG
a. ☞ huqari		*	
b. huq^{h}ari	*!		**
c. uq^{h}ari		*	*!
d. uqari		**!	

In this case candidate (a) is correctly predicted to win, for the same reasons as with tableau (16). However, what is interesting is that the cognate form of this word in Bolivian Quechua, a closely related dialect, is [uq^{h}ari], candidate (c). In this latter form the potential OCP violation is avoided by leaving off the word-initial [h] rather than by de-aspirating the /q^{h}/. In order to derive this outcome some additional constraint would be needed. I do not know if Bolivia Quechua even has the phoneme /h/, or perhaps it does not license it word-initially. Perhaps a solution along these lines would work; I will not pursue the matter here.

I am now in a position to account for the fact that the default epenthetic onset in glottalized roots surfaces as [h] rather than [ʔ]. This can be seen as another case of OCP blockage on the [cg] tier (Parker and Weber 1996). Assuming that the OCP and ONSET constraints are undominated in Cuzco Quechua, observe the evaluation of the following set of candidates for /ayk^{ʔ}a/ → [hayk^{ʔ}a] *How many?*:

(18)

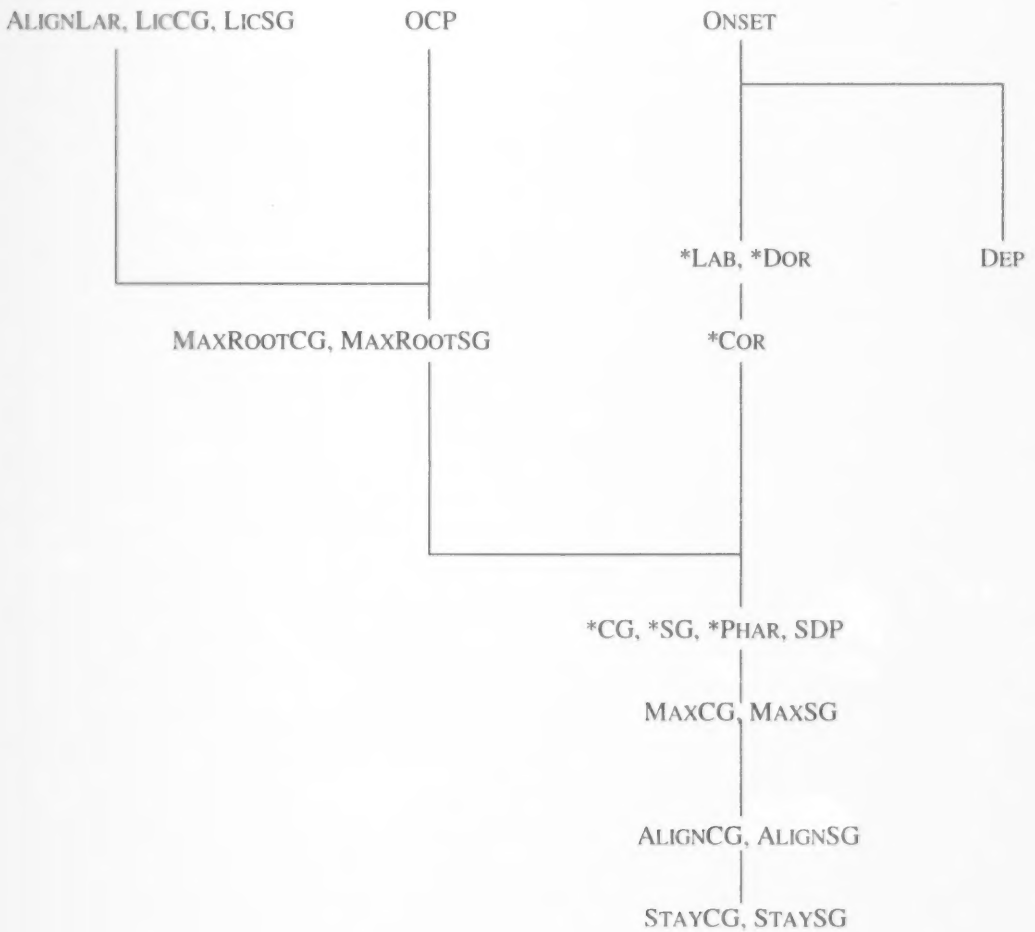
UR: /ayk^{ʔ}a/	ONSET	OCP	DEP	MAXROOTCG	*PHAR	*SDP
a. ☞ hayk^{ʔ}a			*		*	*
b. ayk^{ʔ}a	*!					
c. ʔayk^{ʔ}a		*!	*		*	
d. hayka			*	*!	*	*
e. ʔayka			*	*!	*	

In tableau (18), the high ranking ONSET constraint compels initial epenthesis. Since the totally faithful candidate (b), [ayk^{ʔ}a], does not fulfill this requirement, it is immediately knocked out of the running. Candidate (c), [ʔayk^{ʔ}a], has the normally expected default onset [ʔ], but since an ejective occurs later in the root, the introduction of this segment violates the OCP. Candidate (a), [hayk^{ʔ}a], however, avoids this problem by epenthesizing an [h] rather than a [ʔ]. Since this violates only the lower ranked *PHAR and SDP constraints, [hayk^{ʔ}a] is correctly selected as the most harmonic output. Candidates (d) and (e) attempt to sidestep the potential OCP violation by deleting the [cg] feature on the underlying ejective. This violates the faithfulness constraint MAXROOTCG, sealing their fate as non-optimal forms. As Parker and Weber (1996) note, the insertion of a word-initial [h] in glottalized roots can thus be seen as a dissimilation process triggered by the OCP. Epenthetic [ʔ] and [h] are in complementary distribution in this language; the undominated requirement for an onset leads to a default [ʔ] in most cases since *PHAR is at the bottom of the markedness hierarchy for consonants. However, when the high ranking OCP would be violated (and only then), [h] appears instead. One aspect of this analysis which is theoretically significant is that word-initial [ʔ]'s are normally considered to be nothing but a transitional phonetic reflex, especially when there is no corresponding /ʔ/ phoneme in the language. In Cuzco Quechua, however, this postlexical segment crucially interacts with independently-needed phonological constraints such as the OCP in a unique and interesting way.

5. Conclusion

In this sketch I have outlined an account of laryngealization in Cuzco Quechua in terms of Optimality Theory. Perhaps the most interesting detail of the analysis is a Panini or Elsewhere type of interaction between [ʔ] epenthesis and [h] epenthesis. These latter processes provide additional confirmation of the fact that Pharyngeal, not Coronal, is the universally unmarked place node for default consonants.

Appendix: Ranking of constraints



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High Pitch as a Mark of Respect in Lachixío Zapotec

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Demonstrating respect to the addressee is accomplished by speaking in a high-pitched voice among the Zapotec speakers of Santa María Lachixío. Various factors determine the use of this feature.

In July 1974 my family and I went to the village of Santa María Lachixío to ask the town authorities for permission to live in their village, for the purpose of learning their language. The men left us alone while they went to discuss our request. After they had been gone for quite some time, we heard what we thought were little girls playing dolls outside. On closer inspection we saw, through the window, the town authorities standing in a circle, heads to the middle, hats behind them in their right hands. It was they who had been speaking! This was our introduction to the use of high-pitched voice (high voice).

The people of Santa María Lachixío, a Zapotec town in the district of Sola de Vega, Oaxaca, Mexico, use high voice to show respect toward others. Actual speaking in high voice varies from individual to individual. While some speakers raise their pitch an octave, others seem to raise it as high as their larynxes will allow. Speaking in a higher pitch is the important thing; how much so is immaterial. When speaking in high voice, no voice quality changes occur, such as laryngealization or breathiness.

The custom of using high voice is also practiced in the neighboring town of San Vicente Lachixío, and in a town over the mountain called San Miguel Mixtepec. Both San Vicente Lachixío and San Miguel Mixtepec are closely related linguistically to Santa María Lachixío, and intelligibility among the three villages runs as high as 85%.

Speaking in high voice is obligatory for children when they are addressing their godparents (and the godparents' children above the age of fifteen years), their grandparents, the town authorities, and adult relatives. Children refer to adults who are not close relatives, such as store owners, family friends, etc., as 'aunt' and 'uncle'. Towards them the obligation for high voice decreases. If children make a mistake with them, the offense is not so grave. As they are sent out on errands, children are reminded to "be sure to speak respectfully."

Parents begin seriously teaching children the importance of showing respect when they are about four years of age. It is easier to teach girls than boys, they say. This is because the girls are around the house with the mother, observing what the mother says and does when visitors come. Boys, on the other hand, are out in the fields working and tending to animals. Consequently they pay less attention to such matters. Much of the teaching and reinforcing is done by the grandparents.

In Santa María Lachixío, the greatest effort at teaching children *how* to show respect is made between the ages of six and twelve. During that period of time people will chuckle when children make mistakes, but from age twelve and up they are expected to know how to speak and behave respectfully. If a child does not, the parents draw it to the child's attention telling him, "If you don't speak respectfully, people will think ill of *us*, not you."

There are a few differences between men and women and their use of high voice. Both speak in high voice to their children's godparents (the parents' *compadres* or 'co-parents'), employers, and town authorities. Men also speak in high voice to men and women over the age of approximately sixty, and to certain outsiders, such as doctors or teachers. Women, on the other hand, are more

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41
Online. URL: http://www.und.nodak.edu/dept/linguistics/wp/1997Persons.pdf
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likely to use high voice with men and women who are only *slightly* older than they, and with their parents-in-law.

Most conversations are begun and ended in high voice with dialogue in between spoken in a normal voice. People say this is because it is very uncomfortable to carry on an entire conversation in a high squeaky voice. However, in my close association with two families in Santa María Lachixío for more than twenty years, my experience with the wives in these families has been that they always speak to me in high voice for practically the entire conversation. When I questioned one as to whether she couldn't speak to me normally, she said she could never do that because I am older than she, I have had much more education and, therefore, I merit respect. All this makes it impossible for her to address me in a familiar form. The husbands of these two families do *not* address me in high voice, however.

Many Zapotec languages, including Lachixío Zapotec, have ways of showing politeness in their pronoun systems by the choice of the third person pronoun (Marlett 1993). Some also have a morpheme which precedes a second person pronoun to indicate respect for the addressee (Steve Marlett, p.c.). To my knowledge, however, Lachixío Zapotec is the only Zapotec language that has this device of high pitch for showing respect to the addressee.

Some speakers transfer the practice of high voice to Spanish. One of the women mentioned above uses high voice when speaking Spanish to a particular North American woman of sixty-five years of age. She can't bring herself to speak in a normal voice to someone she respects, regardless of language.

While a lot of sociolinguistic work has focused on politeness, a check of two sociolinguistic textbooks (Fasold 1990 and Wardhaugh 1993) revealed a variety of devices used to indicate such, pronouns and syntax being the principal means. Neither textbook mentioned the use of pitch, however.

This practice in Santa María Lachixío (and environs) appears to be a case of where the only marker of politeness is high voice. Informal research has indicated that this feature was noted among other language groups in Mexico in the past, e.g., Otomí and Tzotzil. In Santa María Lachixío, however, town officials no longer use it among themselves. Nevertheless, this feature is still practiced throughout the village where respect is required. Such demonstration of politeness and showing of respect appears to be an uncommon and, sadly, fast-disappearing phenomenon.

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Rule-governed Allomorphy Can Be Suppletive Also

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Commonly occurring linguistic forms, including allomorphs, tend to be learned (listed in speakers' mental lexicons) even if they are formed according to the pattern of a linguistic rule. They thus have dual motivation: the motivation given by the rule, and the suppletive motivation of their having been learned. This accounts for the otherwise inexplicable persistence of rule-governed allomorphy when the conditioning environment is destroyed through diachronic change, producing apparent positive exceptions to the rule.

Suppletion is allomorphy that is produced by retrieving from the lexicon different phonological forms of the morpheme in question.[1] A conspicuous case is the verb *be* in English, which has the suppletive forms *am*, *are*, *is*, *was*, and *were*, as well as *be*, *being*, and *been:* (/æm, aɪ, ɪz, wəz, wɻ, bi, ˈbiɪŋ, bɛn ~ bɪn/). It would be quite odd to posit a phonological rule to derive, for example, /æm/ from /bi/, or vice versa, or both of them from third form; they are clearly not phonologically-related forms. Thus, it is normally assumed that forms such as *am*, *are*, *is*, *was*, *were*, and *be* are lexically stored. It is also generally assumed that a form like *being*, since it is predictable from the combination of *be* with the suffix *-ing*, is not stored. (*Been* is in some degree predictable as well, since it clearly relates to *be* and the past participial suffix *-en*, but since it is not pronounced /bin/, or perhaps /ˈbiɛn/, it is problematical. Note, for example, that *seen* cannot be pronounced */sɛn/ or */sɪn/.)

A suppletive allomorph's use may be conditioned by grammatical context (e.g., *am* occurs in present tense with first person singular subject), or by phonological context (e.g., the suppletive form *an* occurs prevocalically, and *a* preconsonantally), or by a combination of the two.

Lexical storage is generally equated with cognitive storage in (long-term) memory, the end state of a process of learning. If that identification is taken seriously, however, it is difficult to maintain the assumption that what is predictable must not be lexically stored. What governs learning of a cognitive structure is not primarily how predictable it is—in fact more-predictable structures may actually be more likely to be learned—rather, learning is responsive to factors like cognitive prominence (salience) and, especially, repetition. With often-repeated structures learning is virtually automatic and cannot easily be avoided.

Thus, it would be perfectly plausible to posit that *being*, extremely common as it is, is learned just as thoroughly as *was* and *were*, even though it is also computable from the combination of its parts. In fact, the claim that it is not learned is thoroughly counter-intuitive. However, admission that it is learned should not (and need not) mean that its composition is therefore forgotten or becomes irrelevant. The 'generativity' of lexical rules should be seen as compatible with storage (learning) of particular forms they 'produce', and, in fact, most standard models of the lexicon now allow exactly that. It is not usually invoked for regular cases such as *being*, however, but only for cases like *been* where there is some irregularity or idiosyncrasy to be recorded. *Been* would fit

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[1] Originally suppletive forms were those which were 'supplied' to fill in for missing forms of a root in a 'defective' (i.e., incomplete) paradigm. A typically cited case is the suppletion of the missing past tense form of *go* with the past tense of *wend*. Under that definition, *am*, *is*, *are*, *was*, and *were* are suppletive with respect to *be*, but *been* and *being* are not.

Work Papers of the Summer Institute of Linguistics, University of North Dakota Session 1997 Volume 41
On line. URL: http://www.und.nodak.edu/dept/linguistics/wp/1997Tuggy.htm
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seamlessly with the proposed analysis, of course; it is suppletive in that it is learned, together with its idiosyncratic pronunciation, but that does not mean that its status as an instance of the V + *-en* pattern is abrogated.

Thus, because a form like *being* is not idiosyncratic, but regular, it is not obvious that the form has been learned. Nevertheless, so common a form is certainly learned by all English speakers, and if psychological plausibility is a goal, one's model should reflect that fact.[2]

Similar considerations favor positing learning of common phonologically-'produced' allomorphs. Where these forms are regular they can, of course, be produced by rule without existing in the theoretical lexicon. But if the lexicon is to reflect psychological (cognitive) reality, forms should be in the lexicon to the extent they are learned, regardless of how completely they can be predicted by rule. And, since learning is automatic, given sufficient repetition, common forms can be expected to be learned.

There is evidence for this position in cases where rule-governed allomorphy persists after the environment which originally conditioned it has disappeared. The 'positive exceptions' this process produces are not uncommon.

As one example, in Nahuatl the allomorphy of the third person singular object prefix *k-* ~ *ki-* has been recognized since Carochi (1645) as due to an epenthesis; i.e., the *i* is introduced in contexts where otherwise an illegal (and difficult to pronounce) consonant cluster would result. Nahuatl does not permit tautosyllabic clusters; thus, only two-consonant clusters can occur, and they only occur word-medially. For *k-* ~ *ki-*, then, *i* is epenthesized initially before a consonant, and medially between consonants in a three-consonant cluster.

This is reflected in the paradigm shown in (1). The 'underlying form' is *k-* in each case. In the third person forms, epenthesis occurs between word-initial consonants (i.e., / # k __ C), and in the 'you pl.' form it occurs after the second of a sequence of three consonants, i.e., / nk __C. This paradigm can be duplicated with any transitive CV-initial verb (that can take human subjects).

(1)	*ni-k-neki*	'I want it'	*ti-k-neki-h*	'we want it'
	ti-k-neki	'you sg. want it'	*nan-ki-neki-h*	'you pl. want it'
	ki-neki	'third sg. wants it'	*ki-neki-h*	'they want it'

The epenthesis rule is virtually exceptionless in that there are no tautosyllabic CC clusters.[3] It accounts for numerous other alternations besides these involving *k-* ~ *ki-*. To account for the 'I', 'we', and 'you sg.' forms by deletion would require a rule with hundreds of exceptions that would apply to few morphemes other than *k-* ~ *ki-*. (The evidence is laid out in Tuggy 1981.)

The alternate forms *k-* ~ *ki-* are both extremely common (at least as common as *be* and *is* in English), and they occur in a very restricted set of morpho-phonological contexts. They always occur following a subject prefix, counting the third person zero prefix, and preceding a transitive verb stem.[4] If repetition automatically causes learning, then we should expect the forms to be

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[2] For some forms which are much less common than *being*, or common only in the speech of subgroups, it may be that only some speakers learn them. It is thus not generally useful to ask "Is structure X lexically stored in English?" but "Which (groups of) English speakers have lexically stored structure X?" Putative theoretical distinctions (e.g., between syntax and lexicon) which depend crucially on there being a strict boundary between stored and non-stored structures, are dubious.

[3] This is true for most dialects, except in certain fast-speech situations and in some borrowed words. (Many, if not most, borrowed words are adjusted to fit the canon.) In some dialects this is less true.

[4] There are a very few prefixes that can intervene between *k-* ~ *ki-* and the transitive verb stem, among them *im-* 'plural object', *on-* 'distal, thither', and *wal-* 'hither'. They are not highly relevant to the

suppletive (i.e., learned, together with the morpho-phonological contexts in which they occur). This should not mean that the cases of *ki-* would cease to be examples of the epenthesis pattern; their epenthetic analysis would be an enrichment of them, but would not explain them away or mean that they were not lexically stored.

Evidence that this is correct comes from Tetelcingo Nahuatl, where by a historical change *nan-* 'you pl. subject' changed to *na-* (or *ne-*, cf. fn. 7). If *ki-* were not lexically stored, but only produced by epenthesis, one would expect the form **na-k-neki* to surface,[5] since there would no longer be an underlying three-consonant cluster *nkn* calling for epenthesis to break it up. **na-k-neki*'s canonical structure would exactly parallel that of the first person sg. form *ni-k-neki*. What in fact happened, however, is that people continued using *ki-* in the following context: [second person plural subject] __ C. The form is *nakineki*, not **nakneki*, and similarly for all other CV-initial transitive verbs. To try to account for these forms by epenthesis would necessitate applying it where it has no phonological motivation and where all forms except *ki-* would be exceptional; i.e., *ki-* is a positive exception, a case where the rule has apparently applied even though it should not have.[6]

If the *k-* ~ *ki-* alternation was already learned in its contexts, it had double motivation: the phonological motivation of the epenthesis pattern, and the suppletive motivation of having been learned. When the phonological environment changed, removing the phonological motivation, the suppletive motivation remained. This explains why the form is still pronounced *nakineki*.[7]

It would be quite implausible to claim that the form was always and only produced by rule right up until the time the rule's conditioning environment was destroyed, and then it suddenly,

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discussion, though they do increase the inventory of learned structures given in the Appendix. (For example, speakers have learned a *nan-k-on-* pattern as well as the *nan-k-*V pattern mentioned there.)

[5] In Tetelcingo Nahuatl final glottals are deleted, so the always-final plural suffix *-h* has disappeared from the language.

[6] To attempt to save the rule by positing a stronger boundary between the 'you pl.' prefix and *k-* than between the other subject prefixes and *k-* would be gratuitous and would involve as much extra learning (complication of the model) as would learning *ki-* for that environment.

[7] Actually, it is better to claim that when the final *n-* of the 'you pl. subject' prefix was dropped, speakers were faced with a choice. The phonological motivation would now pressure them to pronounce *ki-* as *k-*, and the learned, suppletive pattern would pressure them to retain it as *ki-*. Choices of this sort, when one group takes one option and another takes a different one, lead to dialectal differences, and it is quite conceivable that a sub-group, or the whole group, of Tetelcingo Nahuatl speakers could have begun saying **nakneki*. However, the community as a whole has settled on *nakineki*. Note that this implies that if a conditioning environment is destroyed and forms change in accordance with the rule (in this case, if the form had become **nakneki*), *this does not mean that the previous forms were not learned*, only that in choosing between possibilities, the motivation provided by any such learning did not prevail.

A functional pressure towards disambiguation is probably relevant to the Tetelcingo case. By the time the *n*-dropping was complete, many, if not most, speakers had also changed the vowel to *e*, changing the form to *nen-* or (by dropping the *n*) *ne-*. At the same time, (historically short) *i*, which had been pronounced [ɪ] (contrasting with the historically long *ī* [i]), began to be often pronounced so laxly as to approximate [e]. There would thus have been only a very slight difference in many speakers' pronunciation of 'I Verb third person' and 'you pl. Verb third person' forms of CV-initial verbs (e.g., between *nikneki* 'I want it' [nɛkˈnɛke] and **nekneki* 'you pl. want it' [nɛkˈnɛke]); and the retention of *ki-* in the latter case would help disambiguate between the pairs. This is by no means a strongly predictive sort of motivation, however; the 'we' and 'you sg.' forms of all verbs have tolerated a parallel ambiguity in all speakers'_speech for decades, probably well over a century (since the final *-h* disappeared).

gratuitously, became suppletive. The proposal that both mechanisms were active before the change is much more natural.

What is arguably true for such cases as *k-* ~ *ki-* is presumably true for myriads of other common alternations where the conditioning environment does not yet happen to have been destroyed so as to expose the suppletive motivation.

Appendix

The following is a more detailed description of what I would posit for the analysis of *k-* ~ *ki-* in Tetelcingo Nahuatl.

Before the final n *of* nan- *dropped*

However it is to be described theoretically,[8] the epenthesis pattern, representing the commonality of many alternations involving the presence vs. absence of *i* was well established. It was involved (however that involvement is expressed)[9] in those alternations that had been learned, including that of *k-* ~ *ki-*. It could conceivably be extended productively to novel forms. (It is hard to document cases that were clearly novel, but that is to some extent an irrelevant fact.) This pattern clearly helped relate *k-* ~ *ki-* to each other as allomorphs of the same morpheme. (Their identical meaning and alternation with each other in paradigms also established that relationship.)

Despite the redundancy, both *k-* and *ki-* were established as forms in the lexicon. They were so established in a number of different contexts. First, their occurrence with hundreds of common verb stems was learned. Examples include *kineki*, *nikneki*, *ankineki*, etc., and parallel forms with *teki* 'cut' and *māma* 'carry on the back', and dozens of other stems. These were doubtless lexical, and the fact that the *k* or *ki* preceding the stem in each case was the third person object prefix was part of what was learned. All of these forms, and particularly those with *ki-*, were instances of the epenthesis pattern and reinforced that pattern.

Arising out of those learned forms were many intermediate-level patterns, generalizations capturing their commonality. Among them were combinations of *k-* or *ki-* with particular prefixes that they commonly occur with. For the first person singular prefix *ni-*, for instance, a family of patterns existed: *ni-k*-CV for forms like *nikneki* (the most common case), *ni-k*-V for forms like *nikasi* 'I grab it', *ni-ki*-CC for cases like *nikihta* 'I see it'. These patterns included information about both the phonological shape of the surroundings and their morphological identity. In other words, since it is invariant, speakers knew both that the preceding CV was /ni/ and that in all these contexts it meant first person singular subject; they also learned not only the nature of the following segment (whether it was a consonant or a vowel), but also that it was the beginning of a transitive verb stem. Thus, in some sense the pattern we have abbreviated as *ni-k*-V would be better written as ['first person sg. subject' | *ni*] ['third person object' | *k*] [transitive verb stem | V...], where the vertical bar separates non-phonological specifications from the phonological ones. Similarly with *nan-*, *nan-ki*-C (including *nan-ki*-CV and *nan-ki*-CC subpatterns) and *nan-k*-V patterns were established in the lexicon, including the information that the phonological string *nan-* meant second person plural subject, and that what followed *ki-* or *k-* was the beginning segment of a transitive verb stem. (Thus, again, what we have abbreviated as *nan-ki*-C might more accurately

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[8] I personally would describe it as a phonological *schema* as described by Langacker 1987 (pp. 393-394, 407-408).

[9] It is conceptually difficult to use the *generation* metaphor of generative grammar and allow any independent existence to the products of a rule. The central claim of the proposed analysis is that such independent existence must be allowed. Langacker's notion of *sanction* or legitimization fits much more easily; schemas sanction both established and novel structures.

be represented as ['second person plural subject' | *nan*]['third person object' | *k*] [transitive verb stem | C...].) Like the learned combinations with particular verb stems which they subsume, *nan-ki*-C and *ni-ki*-CC were examples of the epenthesis pattern. And as the epenthesis pattern itself could cover both established (learned) and novel, productively formed cases, so these patterns could be, and in fact not uncommonly were, used to produce the appropriate forms of verb stems where their combination with the stem was not yet learned.

In essence, people pronounced the sequence /ki/ in *nan-ki*-C for two reasons. One was because of the phonological nature of the preceding (and following) context, which together with the epenthesis pattern said "you pronounce it /ki/ (only) when not doing so will make a bad cluster". They also did it because of the non-phonological nature of the preceding context: "you pronounce it /ki/ following the 'you pl.' prefix (unless a vowel follows)". (The *nan-k*-V [and *ni-k*-V] patterns also happen to fit as examples of a well-established deletion prevocalically.)

When the final n *of* nan- *dropped*

When the final *n* of *nan-* dropped, it dropped in all the learned (established) structures that it occurred in. (This was not an automatic necessity: in fact it hung on a little longer historically in some contexts than in others.) But crucially, when it dropped in the many combinations of *nan-ki-* with particular verb stems, and thus also in *na(n)-ki*-C, examples of the *na-ki*-CV sub-pattern ceased to be subcases of the epenthesis pattern. Speakers could have chosen to allow the epenthesis pattern to dictate the result, and would then have begun to pronounce *k* instead of *ki*. They would, in effect, have been choosing to give the deciding vote to the phonological part of the preceding context. Instead they chose to give the deciding vote to the non-phonological part, to the fact that it was the second person plural subject prefix. The rule they chose to follow was not "you pronounce it /ki/ only when not doing so will make a bad cluster", but "you pronounce it /ki/ following the 'you pl.' prefix (unless a vowel follows)".

Concluding observation

The number of structures that are posited as learned under this analysis, and the amount of redundancy involved, may well be distasteful to sensibilities trained in generative grammar, with its incessant search for the highest-level generalizations possible and its eagerness to excise sub-generalizations and especially particular forms in the name of simplicity. But first, it is psychologically plausible, fitting what we know about how people learn things. They are much more tolerant of redundancy than linguists have been. And second, it explains why forms like *ki-* do not invariably revert to their putative 'underlying form' when the environment for deriving them from that form disappears.

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